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LEAGUE OF NATIONS

Health Organisation

ORGANISATION OF THE PUBLIC HEALTH SERVICES

IN

LATVIA

By

Dr. H. J. CAZENEUVE

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LEAGUE OF NATIONS

Health Organisation

ORGANISATION OF THE PUBLIC HEALTH SERVICES

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Dr. H. J. CAZENEUVE

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PREFACE

Health legislation and administration represent only a fraction of the public life of a people and, like political institutions, health institutions do not form part of an organic whole and cannot develop in accordance with a definite plan. The innovations and changes which have taken place in this sphere must chiefly be ascribed to chance. The hazards of life itself have created the individual problems, and legislative and administrative measures have been dictated by the necessities of the moment. Health problems therefore of necessity present themselves in totally different aspects according to the time and place in which they arise. The technical and moral equipment of the various States being in every respect different, each health organisation has acquired its own special characteristics.

To form a just estimate of the health organisation of a foreign country is therefore a difficult matter even for health specialists. Yet the complexity and increasing number of international problems which are constantly arising call urgently for wider knowledge in the matter ; otherwise, co-operation must remain difficult and our ideas of sanitary conditions in other countries too liable to error.

Furthermore, the nosological information obtained from different countries is difficult to compare, because it is derived from different sources. If work in this domain is to be of any value, it must be preceded by a general standardisation, which in its turn requires a thorough knowledge of national health administrations.

Since the work of the Health Organisation of the League of Nations is purely international, its main endeavour must be as far as possible to overcome all difficulties arising out of the diversity of sources from which its information is obtained. The Health Organisation has therefore decided to publish a series of monographs describing the general outlines and the working of the health administrations of the various countries. It has enlisted for this purpose the co-operation of men holding important posts in the different health administrations.

Its original intention had been to have all these monographs drawn up in accordance with a definite plan, and it had sent a memorandum in this sense to the respective authors in the hope of obtaining reports capable of being directly compared with one another. Most of the authors, however, preferred to draw up their reports on less rigid lines.

The series of monographs which we are publishing deals only with general health administration. We propose in the future to publish also papers dealing with certain special aspects of public health, in order to furnish more detailed supplementary information on particular points.

The publication of the general monographs which have already appeared has been greatly facilitated by the generous financial assistance extended to us by the International Health Bureau of the Rockefeller Foundation.

GENEVA, *June* 1925.

HEALTH SECTION OF THE SECRETARIAT
OF THE LEAGUE OF NATIONS.

AUTHOR'S NOTE.

The present study of the health organisations of Latvia was made on the occasion of the inauguration of the Libau Quarantine Station. I remained in Latvia from November 11th to 30th, 1924, and visited Liepaja (Libau) and the districts of Riga, Jelgava (Mitau) and Daugavpils (Dvinsk).

Dr. KIVITCKIS, Director of the Department of Public Health ; Dr. JANKOWSKI, Professor of Clinical Surgery and President of the Latvian Red Cross ; Dr. E. FEHRMAN, Professor of Hygiene in the Faculty of Medicine ; and Dr. JOHNSON, Assistant-Director of the Department of Public Health, have given me valuable information and advice. I apologise to them if I have anywhere misrepresented their statements and I thank them for their hospitable welcome.

I also thank M. FELDMANS, Latvian Delegate to the League of Nations, for the kindness he unfailingly showed me during my journey.

GENEVA, *January 10th*, 1925. H. J. C.

LATVIA

ESTHONIE
VENTSPILS
(WINDAU)
Valniera
Cesis
RIGA
Kuldiga
Tukums
Aispute
Saldus
JELGAVA
Bauska
Daugava
Jaunjelgava
Jekabmiests
Rezekne
LIEPAJA
(LIBAU)
DAUGAVPILS
(DVINSK)
LITHUANIE
POLOGNE
RUSSIE

INTRODUCTION.

The health organisations of Latvia in their present form date from 1919 and are accordingly of very recent origin. They were erected on the ruins of the organisations which preceded them, and their principal task is to adapt the past to new conditions. They have not yet taken their final shape, and every day sees some new transformation, evolution or progress.

They were born in troublous times. The world war and the disturbances which followed this country's declaration of independence had their effect on the old health organisations.

The Russian administrative and medical machine had disappeared and the hospitals and a large number of public health institutions had been destroyed, disorganised or converted to other uses.

Distress was widespread and budget resources were limited. Serious epidemics of typhus, relapsing fever, typhoid, infections and dysentery from the East spread throughout the country during 1919, 1920 and 1921 and undermined its vitality. The number of wounded, war-disabled men, destitute refugees and neglected children to be looked after was enormous.

The authorities of the new State had to grapple with all these difficulties with the limited means at their disposal. Their first task was to shelter, feed, tend, clothe and delouse all these people in distress. Despite the economic confusion, they succeeded, with the whole-hearted support of the public, in meeting these primary necessities.

The initiative of private associations, powerfully assisting the embryonic administrations of the State, often did more for their country than the administrations themselves.

The Latvian Red Cross, thanks to the local organisation which it already possessed, performed the initial work with considerable speed and efficiency.

The health organisations of the city of Riga, which had been placed on a solid foundation under Russian rule, were able to resume their work.

The health administration of the State began to reconstitute the staff of the health districts. With the assistance of the League of Red Cross Societies, it kept up the campaign against typhus. With the advent of the new order, the standard of health and comfort improved. The cruel destitution of the early months, which had been fought by improvised methods, disappeared. From 1922 onwards, the State administration was able to begin perfecting its methods and its resources. The work of reorganisation was pursued, the hospitals were put into working order, repaired and supplied with furniture, linen, instruments, apparatus and stores. An important hospital, that for infectious diseases at Riga (No. 2 City General Hospital), is, however, still closed. The departments responsible for the campaign against, and

supervision of, infectious diseases (notification, isolation, disinfection) have been re-established. The public authorities are studying the improvement of the organisation for the supply of drinking-water and the evacuation of foul water and of sewage, which has hitherto been much neglected in the different towns.

The philanthropic organisations for the campaign against tuberculosis and against venereal disease and for the protection of mothers and children are being reconstituted and organised.

———

The following notes are intended to give some idea of the health organisation of Latvia at this stage of its progressive evolution. We propose to study the campaign against infectious diseases in Latvia and will only glance briefly at the philanthropic and social welfare organisations, which are developing somewhat more slowly.

Part I.

HEALTH LEGISLATION.

General Review.

The health legislation of Latvia is based on the Legislative Code of the former Russian Empire, Vol. XIII, the last edition of which appeared in 1914.

When Latvia's independence was declared, the Government adopted the Russian Legislative Code as the basis of its legislation. But the spirit of the code of an autocratic empire was difficult to reconcile with the new spirit and new circumstances of a young democracy. A fresh series of regulations was necessary.

The revision of the Russian health laws has been going on with regularity since May 1920, with a view to adapting the old rules to new requirements. A number of regulations and decrees have been published amending and supplementing the old Russian laws which are still in force.

The principal chapters of the Russian health code which have still, fully or partially, the force of law are as follows :

Book I.

Introduction : Organs of the Central Health Administration.

I. Local health administration :

(1) In the provinces ;
(2) In the districts and towns ;
(3) Duties of the district medical officer ;
(4) In the villages ;
(5) Private practitioners ;
(6) Midwives.

II. Administration and organisation of State hospitals, communal hospitals and private hospitals.

III. Watering-places.

IV. Chemists, pharmaceutical factories and laboratories.

V. Regulations for examinations for the doctor's degree, for the dentist's diploma, including examinations for medical assistants.

Book II.

Public Health Police Code.

I. General regulations.
II. Regulations for the preservation of public health :
    (1) Purity of the air ;
    (2) Purity of food ;
    (3) Sale and purchase of poisons ;
    (4) Burial of the dead.
III. Special regulations in regard to contagious diseases.
IV. Quarantine at sea.
V. Epizootics ; Veterinary police.

Book III.

Code of Forensic Medicine.

I. General regulations.
II. Medico-legal autopsy of corpses.

Since the entry into force of the Latvian Constitution, the Department of Public Health has published a certain number of decrees and regulations. The chief refer to the following subjects :

1. Exercise of the medical and pharmaceutical professions.
2. Notification of infectious diseases.
3. Supervision of foodstuffs and of laboratories.
4. Sale and conveyance of toxic substances ; administration of State hospitals and of watering-places.
5. School hygiene.
6. Isolation of lepers.
7. Campaign against dysentery and typhoid infections.
8. Campaign against infectious diseases.
9. Treatment of hydrophobia.
10. Vaccination against smallpox.
11. Duties of district medical officer.
12. Exercise of the profession of midwife.
13. Free attendance.
14. Admission and treatment of the sick in the State hospitals.
15. Health supervision of refugees and immigrants.

A Committee of three members, consisting of a legal expert and of the professors of hygiene and of forensic medicine in the Faculty of Medicine at Riga, has been appointed by the Minister of the Interior and by the Director of the Department of Public Health for the purpose of revising health legislation.

Its programme is as follows :

1. The revision of all the health clauses of the Russian Penal Code of 1903 at present in force, with a view to the complete revision of the Russian Penal Code, which is being undertaken by a second committee of jurists.

2. The revision of Book I of Vol. XIII (Russian Health Code) on the composition of the central services of the Department of Public Health. Arrangements are to be made for the creation of a Central Health Board, which has hitherto been lacking in Latvia, and for the amalgamation of the three present sections — the Medical, Pharmaceutical and Veterinary Sections — under the Chief of the Department of Public Health.

3. The revision of Book III on the organisation of forensic medicine.

4. Definition of the privileges and duties of doctors (Book I, page 5).

Drafts on the first three items have already been submitted to the Legislative Parliamentary Committee.

The Committee will then go on to consider the regulations relating to the campaign against contagious diseases, tuberculosis and venereal diseases. It will revise the regulations on the duties of district medical officers and on the protection of the purity of the air, the soil and the water.

Thus the work of health legislation and of organising the health service of Latvia has been carried on by regular stages.

The local health services of the towns and districts which were already in existence have been easily put into working order and adapted to the conditions of the new State.

On the other hand, the central and general services of the Department of Public Health have not yet reached the requisite stage of organisation. These services had to be created out of nothing. The Latvian provinces, which are now united in an autonomous country, belonged to several different " governments " of the former Russian Empire, and at Riga there was no general health department with central and administrative services for these provinces (General Health Department ; health commission and health boards ; Government health institute ; analytical and testing laboratory ; laboratory for preparing vaccines and sera ; charitable and public welfare associations, and associations for the campaign against venereal diseases). In the same way, a new university has had to be founded for medical instruction.

This work of reconstructing and renovating the public health organisation was carried on in the most difficult conditions — a devastated country, widespread poverty, and an improvised staff, in some cases inadequately prepared for their new duties.

So far, the results have been excellent, and the improvised health services have overcome the difficulties of the first years. The technical equipment and the moral authority of the State have increased. The work of legislation and administration is making regular progress, side by side with the other political institutions of the country. The goal is not yet reached, but seems within measurable distance.

This work of renovation gives the health organisation of Latvia its special characteristics.

II. ADMINISTRATION : REVIEW OF THE PRESENT PUBLIC HEALTH ORGANISATION.

A. Official Organisation.

I. *General Directorate of the Public Health Department : Central Health Service.*

The Department of Public Health is attached to the Ministry of the Interior. It has a general directorate which centralises the business of the whole department. The present Director is Dr. Kivitckis, who is assisted by an Assistant-Director, Dr. Max Johnson.

The Department of Public Health is divided into three services : the Veterinary Service, the Pharmaceutical Service, and the Central Health Service.

The Veterinary Service and the Pharmaceutical Service are directed by experts in those branches who enjoy a certain measure of independence. The Director and the Assistant-Director of the General Directorate of the Department of Public Health also act as Director and Assistant-Director of the Central Health Service.

The Central Health Service is divided into three sections :

1. Health and Statistical Epidemiology Section, under Dr. Sentel. Its chief duties are :

(a) To centralise statistical data received directly from the district medical officers in the form of individual certificates, and from the City of Riga Health Bureau in the form of general reports. It constitutes the national bureau of medical statistics ;

(b) To exercise a general control of the health supervision services in town and country, of waterways and sewage, of industrial undertakings, and of foodstuffs and provisions ;

(c) To co-ordinate measures for combating infectious diseases and prepare laws and regulations on public health, on health conventions and on general health education ;

(d) To arrange for expert advice on points of medical jurisprudence. This section is the technical section of the Central Health Service.

2. An Administrative Section, which keeps a register of and supervises the staff of the health services and all persons exercising professions connected with medicine (doctors, chemists, veterinary surgeons, dentists, midwives, hospital attendants, nurses). It also supervises all public establishments for the protection of health: hospitals, consulting-rooms, medical clinics, asylums, dispensaries, disinfection services, etc.

3. A Budget Section, which prepares the budget, deals with the salaries and wages of the staff of the Health Service, and supervises the financial administration of the medical establishments and institutes of the State.

The General Directorate of the Department of Public Health has not yet established permanent advisory commissions, such as a Central Health Board or an Epidemics Commission. It has been content with calling in the services of a Committee of Experts on two occasions since its creation.

1924 *Budget.*

Expenditure	1,952,104 lats.
Receipts	319,243 lats.

II. *Other Ministries or Services concerned with Public Health.*

The Minister of War has under his orders the medical corps of the army and navy.

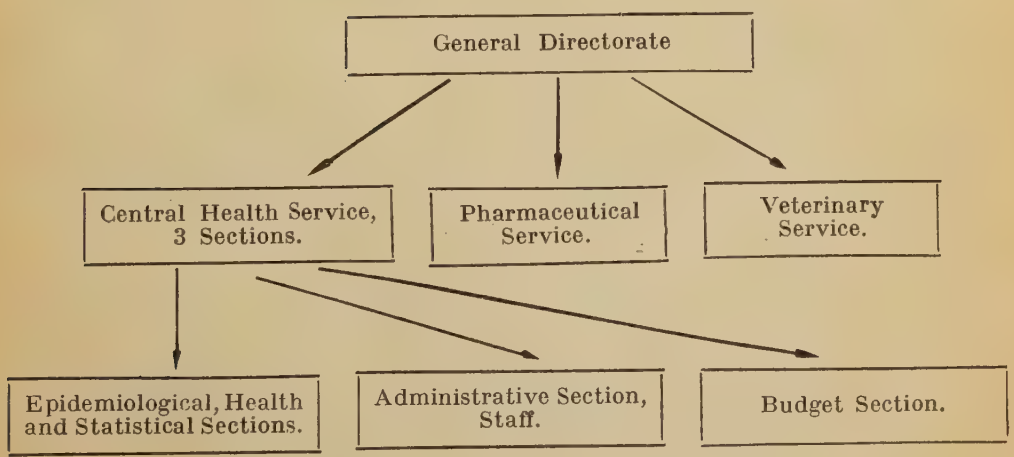
The Minister of Labour has under his authority the various services dealing with public health and social insurance, including sickness insurance and medical treatment of Government employees and officials ; workmen's insurance against accidents and sickness ; supervision and inspection of labour conditions ; hygiene and sanitary inspection of factories and workshops ; assistance to the infirm, to invalids and to the destitute.

All the relief funds of the communes or of private companies, and their hospitals and consultation services are placed under the authority of the Minister of Labour.

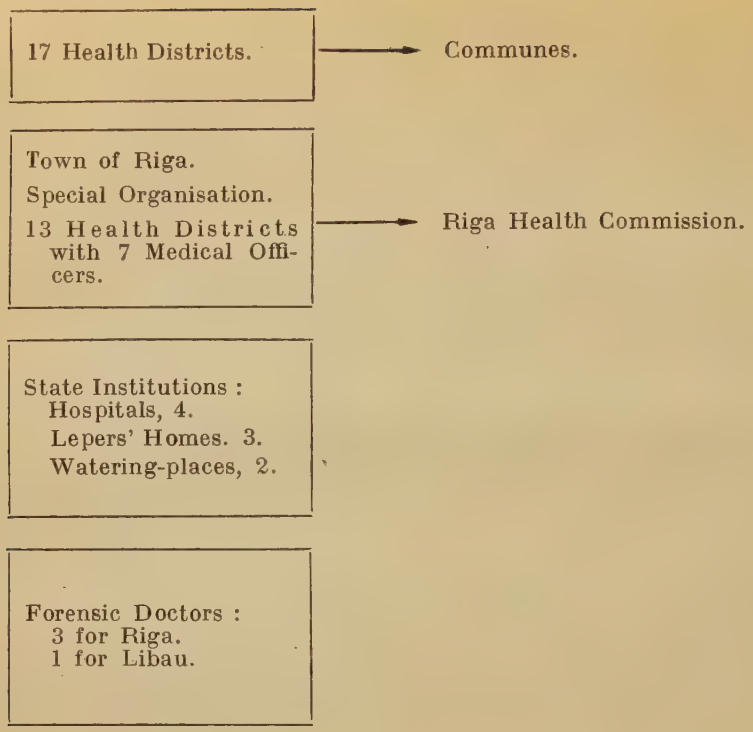
Health Organisation (Ministry of the Interior).

Department of Public Health.

I. *Central Services.*



II. *Local Services.*



III. *Health Organisation throughout the Country.*

(a) *Health Areas.*

Latvia is divided into eighteen health areas.

The first area is that of the City of Riga Health Service. Owing to its importance and long standing, it enjoys a certain independence and corresponds directly with the General Directorate of the Department of Public Health. This area is divided into thirteen smaller sectors. The central services are under the orders of Dr. GRUNSTEIN, chief of the City Health Service, assisted by Dr. SCHANSBERG. The health supervision of the thirteen urban sectors is carried out by seven medical officers belonging to the municipal health service.

The other medical areas are the seventeen health districts of the country.

The administrative unit of the health service is the district ; in each district the health service is under the orders of a doctor, called Medical Officer of the District Health Service or, more shortly, District Medical Officer. He is under the direct authority of the Central Health Service. The division of the country into four provinces does not affect the administrative division of the health services.

Each health district includes a certain number of communes. The district medical officer is head of the health service of the communes in his district, but he usually has a municipal medical officer to act for him in the communes.

The communes are administered by a corporation elected every five years. These corporations appoint a municipal health commission presided over by the district medical officer, or in his absence by the municipal medical officer. The municipal medical officer is appointed by the district medical officer on the nomination of the municipal commission. The General Directorate of the Department of Public Health exercises general supervision over the activities of the municipal health commissions.

(b) *Authorities responsible for Health in Ports.*

At present there is no special coastal service of public health police. The seaboard is not divided into sanitary areas.

The application of the general rules and instructions regarding maritime health police is supervised by the municipal health authorities of each port.

The municipal authorities of ports receive direct information from the General Directorate regarding the state of health in neighbouring districts and in the foreign countries with which that port has relations.

When circumstances demand it, a medical officer is detailed to examine on its arrival a vessel coming from a region officially declared to be infected. This examination may be confined to a brief inspection of the vessel, or may be extended, if desirable, to the medical inspection of all the passengers and crew.

At Liepaja (Libau) only two vessels have been thus inspected in the last three years.

The creation of a special medical police service for the health supervision of ports is under consideration. The 1925 budget provides for the appointment of a special maritime medical officer for the ports of Riga and Liepaja.

The coastal health service comprises the following establishments :

1. A maritime quarantine station constructed on the inner channel of the port of Libau with the help of the League of Nations. This station, which was inaugurated on November 11th, 1924, possesses two isolation huts, with thirty beds each, for the diagnosis and treatment of contagious diseases, together with disinfection and disinsectisation rooms equipped with modern appliances. It is capable of rendering valuable services, and is under the orders of the chief medical officer of Liepaja.

2. A smaller station of the same type at the entrance to the port of Riga.

The health police of the Latvian coast is not yet fully organised. The vessels arriving in Latvia generally come from the neighbouring Baltic ports or from the ports of Western Europe, *i.e.*, from countries which are usually free from epidemics. This accounts for the comparative simplicity of the formalities with regard to the inspection of ships and their admission to Latvian ports and for the absence of a thoroughly organised maritime health service.

The volume of shipping in Latvian ports tends to increase. It would be a good thing if regulations were drawn up regarding the rules to be observed on the coast, in the ports, in the roadsteads, in the marine quarantine hospitals and in connection with the arrival of vessels from countries considered to be infected, and also regarding the duties, composition and competence of the authorities responsible for applying these rules.

(c) *Supervision of Waterways.*

A station for the health supervision of navigable waterways has been established above Daugavpils (Dvinsk) on the Dvina (Daugava). About three thousand rafts of wood are sent down the Dvina during the summer from Russia.

A medical observation service is established on both sides of the frontier. A health convention concluded with the Union of Socialist Soviet Republics provides for the delousing of all lumbermen by the Russian Health Service before their arrival in Latvian territory and the medical inspection of each man, after his entry into Latvia, by a Latvian doctor. The river quarantine station is at Indra, 75 kilometres from Daugavpils. It is under the authority of the Daugavpils district medical officer. Below Indra, the river is divided into health sectors, with medical stations to receive the sick, or those suspected of sickness, on the rafts. They are placed under the care of a medical attendant.

On arriving at Riga, the lumbermen who live on the rafts coming from Russia are required to be deloused a second time at the disinsectisation stations of the town.

B. Philanthropic Auxiliary Organisations, Private, National and Local.

In addition to the official institutions, there are several auxiliary philanthropic organisations in Latvia which lend active assistance in the sphere of public health.

These organisations are :

The Latvian Red Cross ;
The Society for the Campaign against Tuberculosis ;
The White Cross for the Campaign against Venereal Diseases ;
The German Hospitals Society ;
The " Bikur Cholin " and " Livia Hacedek " Hebrew Relief Societies ;
The Russian Hospitals Society ;
The " Mother and Child " Association ;
The Association for the Campaign against Drink.

The Latvian Red Cross.

The Latvian Red Cross plays a large part in the general life of Latvia and in the sphere of public health and social welfare.

It was founded on November 19th, 1919, a few days after the declaration of Latvian independence. During the first months of independence the health service of

the State had not yet been constituted. The Latvian Red Cross was the only organisation in a position to succour the sick and wounded.

As early as November 1919, it established several hospitals at Riga, Liepaja and other towns. When Riga was occupied by the Bolsheviks, a section of the Latvian Red Cross remained in the town and carried on in spite of all difficulties. The Central Bureau and several other sections were organised at Liepaja. They returned to Riga when that city was liberated.

Since then the Latvian Red Cross has continually developed and has been an important factor in Latvia's public health equipment. Thus private initiative, inspired and guided by the Latvian Red Cross, is able to co-operate effectively with the health services of the State.

From its earliest days, Latvia was thus endowed with hospitals and organisations which it would otherwise have been unable to create.

When the war organisations lost their utility, the Latvian Red Cross established hospitals for the civil population and set up several medical-relief centres.

The following is a summary of its activities :

War Organisations. — Hospitals for the wounded ; assistance of war invalids ; creation of a centre of protheses and of surgical appliances.

Post-war Organisations. — Reconstitution of stocks of material.

Provision of transport facilities for the wounded, medical trains and motor-cars capable of being rapidly equipped and employed in cases of accidents on a large scale.

Foundation of hospitals provided with modern appliances ; the majority of the beds are reserved for surgical cases but there are also medical wards.

In certain towns such as Jelgava and Daugavpils, the new and up-to-date Red Cross hospitals display much greater activity than many of the older municipal hospitals.

Establishment of dispensaries and consulting-rooms in the towns and particularly in the eastern devastated areas (Rezekne, Ludza). The greater part of the medical attendance given to the population in the devastated areas is provided by the Red Cross. In the dispensaries set up in these areas, medicine is distributed free and the doctors and midwives are remunerated.

Relief given to Latvians (refugees, children, orphans, prisoners) at Leningrad and Moscow in 1921 and 1922 by a delegation of the Latvian Red Cross in Russia.

Social Welfare Organisations. — *(a)* Against tuberculosis : creation of a sanatorium at Asari for sickly children and children suspected of tuberculosis ; creation of a sanatorium at Kremulda for children and adolescents suffering from tuberculosis of the bones ; *(b)* Protection of mothers and children : establishment of consulting-rooms in several towns (with remarkable success) ; *(c)* Creation of an institution at Cesis for the re-education of disabled ex-soldiers ; *(d)* Training organisations : creation

of a school of nursing for girls leaving secondary schools (several nurses, after a course of training in London, have been appointed nurse inspectors and perform their duties with intelligence and zeal) ; *(e)* Organisation of health exhibitions which tour the country during the summer and contribute to the education of the people in health matters.

Programme for the future. — Establishment of consulting-rooms and dispensaries for numerous purposes (tuberculosis, syphilis, consultations for mothers and infants) in the working centres, near the factories and in the slums of the large towns. The first will be established at Riga and will also serve as a training centre for the nursing staff.

Organisation. — The Latvian Red Cross is a national institution. It has earned the praise and support of the people and of the Government. Among its honorary members are ex-Ministers and well-known financiers and jurists. The *élite* of society enthusiastically assists it in its work. It possesses a thorough organisation and a solid framework and employs the services of numerous assistants and hospital attendants, two hundred of whom receive remuneration.

The events of the last ten years have indissolubly linked the sentiments of independence and national pride with those of humanity and charity. There can be no doubt that this has contributed to the rapid development of the Red Cross.

It has an independent and efficient administrative bureau, and it maintains fifteen sections in the provinces.

Its Director is Prof. Jankovski. He is independent of any authority but that of the Chief of the State, and, being free from administrative formalities, he can take the most rapid action. In case of war he is placed under the orders of the Commander-in-Chief.

Prof. Jankovski is a great servant of his country. He is the creator of this magnificient organisation and he inspires it with a spirit of unfailing enthusiasm. His goodness of heart is only equalled by his modesty, and his name is known throughout the country, for he has tended and saved countless sick and wounded.

Funds. — The funds are derived from charity bazaars, gifts, subscriptions, lotteries guaranteed by the State, certain taxes (playing-card monopoly, stamp duty of 0.420 to 0.10 lats on railway tickets), Government subsidies granted for specific purposes, and the receipts of the hospitals. Its budget in 1924 amounted to 829,761 lats.

Such, briefly, is the part played by the Latvian Red Cross in the health organisation of the country.

Devastated Regions in Latvia : Relief Work.

Latvia suffered particular hardships from the war from 1915 to the end of 1919. The Russo-German front was stabilised for a year and a-half along the river Daugava. This region, which was the fighting area, was one of the best cultivated and most prosperous in Latvia. It was entirely devastated along a belt 300 kilometres in length

and from 50 to 100 kilometres in breadth, *i.e.*, over an area equivalent to a quarter of Latvia.

The Russian retreat of 1917, the German occupation, the Bolshevik occupation, and the battles which led to the liberation of the country further added to the devastation.

There were 148 parishes and 7 districts laid waste ; 25,000 farms and 104,576 buildings, amounting to one-tenth of the buildings in the whole country, were destroyed. Seventy thousand horses, one-quarter of the total number in the country, and 170,000 cattle, 18.5 per cent (?) of the cattle in Latvia, disappeared. The area under cultivation diminished by 25 per cent. There were 28,000 carts, 20,000 ploughs and 12,000 agricultural machines destroyed.

Part of the population had to take refuge in Russia ; the rural population diminished by 42 per cent., the following districts suffering particularly :

District	Number of Inhabitants : Before the war.	After the war.
Jelgava	122,000	64,698
Ilukste	74,000	45,428
Jaun Jelgava	70,000	40,263
Riga	129,000	82,730

There were 313,161 inhabitants, including 92,507 children, homeless, without means of support and without clothes. The return of refugees from Russia further aggravated the situation.

The work of relief was rapidly organised, with the assistance of the Latvian Government, of foreign charitable organisations, and of Latvian philanthropic societies.

In 1922-23, the Government voted a grant of 1,359,000,000 Latvian roubles for the reconstruction of farms in the devastated regions, and a further grant of 129,000,000 roubles in 1923-24.

In 1921, the American Red Cross, the American Child Welfare Administration, Lady Paget's mission, and several other charitable organisations assisted these regions both by the work of their members and by their gifts.

There were 9,045 children clothed and shod. Medical stations, providing attendance and medicine, and 33 kitchens, feeding 3,300 children, were opened in the devastated areas. These missions concluded their activities in 1922. The work of relief and reconstruction was continued by the Latvian Government and by private initiative. A Congress and a Committee for the Devastated Regions and a Society for the Evacuation of Refugees were founded at Riga. The Latvian Red Cross carried on the work of the American Red Cross.

An immense amount of distress has been relieved. There are still, in 1925, some hundreds of people living on the banks of the Daugava in war dwellings.

III. PERSONNEL.

A. The Medical Profession.

According to the " Latvian Statistical Year-book, " the strength of the medical personnel in 1923 was as follows :

Doctors	813
Surgeons officially recognised by the Department of Public Health	168
Midwives	880
Dental Surgeons	538

Doctors. — Of the 813 doctors mentioned above :

425 practise in the town of Riga,
56 ,, ,, Liepaja,
27 ,, ,, Jelgava (Mitau),
38 ,, ,, Daugavpils,

making 546 doctors for the large towns, and 267 for the small towns and the countryside. The towns are therefore much better supplied with doctors than the country.

This is due to the special conditions of life and to the way in which the population is distributed in the rural districts. In Latvia, the peasants' dwellings are not as a rule close together in hamlets and villages, but are scattered over the whole surface of the arable land. The breaking up of the big estates under the new agrarian laws has accentuated this dissemination of dwellings ; the holders of the new estates, which run to about 20 hectares, establish their farms on the land they acquire. The difficulties of communication and the great distances to be covered render the exercise of the medical profession in the rural districts particularly arduous.

The distribution of the doctors among the various provinces is shown in the following table :

Towns.	Total number of physicians.	Number of inhabitants per physician.	Number of physicians per 10,000 inhabitants.
Riga	425	670	15.76
Jelgava (Mitau)	28	898	12.65
Liepaja (Libau)	56	1,429	7.99
Daugavpils (Dvinsk)	39	975	10.25
Provinces.			
Vidzene (Livonia)	108	3,928	2.54
Kudzeme (Courland)	97	5,980	1.67
Latgale	60	8,817	0.13

In 1923, the number of doctors per 10,000 inhabitants in the neighbouring Baltic countries was as follows :

Country	Number of physicians	Number of physicians per 10,000 inhabitants	Number of inhabitants per physician
Latvia	813	4.39	2,276
Lithuania	410	1.74	5,741
Esthonia	534	4.45	2,247
Finland	720	2.22	3,372
Sweden	1,771	2.96	4,730
Poland	5,192	1.96	5,079
Germany	38,186	5.98	1,667

The 813 Latvian doctors may be classified as follows according to age :

34	doctors	between	25	and	30	81	doctors	between	60 and 70
305	,,	,,	30	,,	40	11	,,	,,	70 ,, 80
165	,,	,,	40	,,	50	2	,,	,,	80 ,, 90
215	,,	,,	50	,,	60				

The large drop in the number of doctors between 40 and 50 shows the losses suffered by the medical profession during the recent epidemics and the war.

The majority of the Latvian doctors carried out their medical studies at the Universities of Dorpat and Petrograd. A Faculty of Medicine was created at Riga in 1919. In 1923, it had 854 students.

B. The Officers of the Public Health Service.

The doctors in charge of the public health services in Latvia may be divided into two groups :

1. Doctors under the Department of Public Health : 23 doctors, including 17 district medical officers, 3 doctors for the Central Health Service and 3 doctors for medical jurisprudence and for the police service.

2. Doctors under the municipalities, numbering 18.

I. *District Officers.*

Latvia is divided into seventeen health areas or districts.

The duties of the district medical officer, as an official of the Department of Public Health, are important. On him depends the whole health administration of the country. All measures relating to the protection of public health are within his province. In addition, he acts as forensic doctor and as doctor for police purposes.

His sphere of action extends over a very wide area, in which health conditions are often precarious. He is the medical adviser of the highest administrative authority of the district, of the prefect and of the mayors of municipalities. He is responsible for calling upon these authorities to apply the necessary health measures. These duties demand a considerable degree of technical and administrative skill.

Personnel. — The district medical officers, who are the doctors of the health service, are recruited from the ordinary medical practitioners. Several of them were district medical officers in Latvia before 1914.

Their salaries vary from 160 to 200 lats per month. This does not provide them with sufficient means of subsistence, and they are obliged to increase their income by practising privately or for other bodies (insurance associations, etc.). They are therefore only able to devote a portion of their time to their duties as doctors of the health service.

Training. — These numerous occupations render it difficult for them to leave their practices for courses of training at Riga, or to take part in interchanges abroad. When they absent themselves, they lose the earnings which they derive from their various duties, and also have to pay for a substitute. The consequence is that they do not aspire to take part in the interchanges organised by the League of Nations.

A certain number of them were able to attend an advanced training course organised by the Department of Public Health at Riga in 1921. This course lasted for six weeks, and dealt with general hygiene, administration, medical jurisprudence and psychiatry.

There is a proposal at present under consideration for the creation of an advanced health course at the Faculty of Medicine at Riga, which a certain number of district and municipal medical officers would be invited to attend for a period of six weeks.

Every effort should be made to encourage and promote the training of health officers, but the task is a delicate one in view of the average age of these doctors, which is about fifty, of the small resources of the Department of Public Health, and of the difficulty of effecting these interchanges.

Duties. — These are defined in regulations published in Nos. 48 and 49 of the *Official Journal* dated February 21st, 1921, and embodied in a special notice, " Deenefta

Noteikumi Aprinku Chrfteem ". An account of visits to the capitals of two districts, one of them rich and the other poor, will give a better idea of the medical activities of district officers than would a mere translation of a notice regarding their duties. It will also serve to show the conditions of life and the health problems of the country.

District of Jelgava.

General Information. — The district of Jelgava has an area of 2,882 square kilometres. It occupies the plain crossed by the Lielupe (Semgaller Aa) and by the close network of its ten chief tributaries. It is one of the most fertile districts in Latvia.

In 1914, it had 122,300 inhabitants ; in June 1920, 64,698 ; in January 1924, 79,500 and 27.58 to the square kilometre. It is the most populous district of the province of Zemgale, which is divided into five districts.

The capital, which is in the centre of the district, is Jelgava (Mitau). It is 60 kilometres from the farthest point of the district, which lies to the south-west. The smaller towns are Auce, 50 kilometres from Jelgava, and Dalbe, 25 kilometres from Jelgava.

Before the war, Jelgava (Mitau) was the centre and capital of the province of Courland. It had 40,000 inhabitants, but now only has 23,785, of whom 50.5 per cent are Letts, 10 per cent Lithuanians, 10 per cent Great Russians, 15 per cent Jews, and 12.2 per cent Germans.

Jelgava is situated on the left bank of the Lielupe, which is navigable in the direction of Riga.

The town is clean, of considerable extent, and has numerous old wooden houses. It suffered from the war in 1920 at the time of the last struggles to free the district from the German troops of Bermond. Its historic castle, which had been built in 1740 on an island in the river on the site of the old castle of the Knights of the Teutonic Order, was burnt. Its library, which contained 20,000 volumes, fell a prey to the flames, as did several other large buildings in the town, which have not yet been rebuilt.

Jelgava is the third town of Latvia in point of population. It is an important railway centre, within easy reach by rail and river of Riga, which is 40 kilometres distant.

Health Conditions. — The general health conditions of the town and district are quite good and are among the best in Latvia. In 1923, the total number of deaths in the district was 1,068 ; the number of births was 1,211, giving a surplus of 143 births over deaths.

The province of Zemgale, to which the district belongs, had 19.80 births and 13.88 deaths per 1,000 inhabitants.

Infectious diseases notified in the district were :

	1922 :			1923 :		
	In the town	In the district	Total	In the town	In the district	Total
Smallpox	2	0	2	0	0	0
Typhus fever	9	9	18	0	0	0
Typhoid fever	14	27	41	15	10	25
Relapsing fever	1	4	5	0	0	0
Paratyphoid	0	0	0	0	0	0
Dysentery	10	10	20	3	3	6
Malaria	0	1	1	1	0	1
Measles	1	1	2	3	4	7
Scarlet fever	13	87	100	72	39	111
Diphtheria	12	5	17	11	21	32
Cerebro-spinal meningitis	0	0	0	1	0	1
Hydrophobia	0	0	0	0	0	0
Leprosy	0	0	0	0	1	1

The drinking-water supply of Jelgava is brought by an aqueduct from the river Sveta, four kilometres to the west above the town. Two artesian wells, bored to a depth of 170 metres, help to supply the town with drinking-water.

The town has no sewage system; the houses have more or less water-tight cesspools, which are periodically emptied. Typhoid infections are endemic, but have been infrequent since 1922.

Health Equipment. — The district possesses :

Doctors	in the town	27	including 6 surgeons recognised by the Department of Public Health.
	in the district	11	
	Total	38	
Dentists		12	
Midwives	in the town	28	
	in the district	26	
	Total	54	
Hospitals	in the town	4	
	in the district	2	
	Total	6	
Chemists		17	

The most active hospital at Jelgava is that of the Red Cross. It possesses 110 beds, and gave treatment to 791 patients in 1923 and 1,329 in 1924 ; performed 700 operations in 1924 and gave 3,980 consultations during the same year.

Near Jelgava is the Guntershof Lunatic Asylum, belonging to the State : it accommodates 360 patients.

Disinfection Service. — This includes a fixed steam disinfection boiler in the town and several portable formaline apparatus for town and country ; two hospital attendants.

Duties of District Officers. — These duties may be divided under four heads.

1. *In connection with the Police* : Investigation of injuries caused by accidents, blows and wounds. Expert assistance in the identification of unknown persons. Diagnosis of the fitness for work and of the state of health of persons arrested by the police.

Determination of cause of death in the case of accidental, unexpected or sudden decease.

2. *Forensic Medicine* : Expert advice in all criminal cases, ten cases per month ; autopsies. Evidence in law courts, two to four hours per week. These medico-legal duties take up a considerable time ; crimes and acts of violence are numerous, public security on the high-roads and in the countryside being not yet well established.

3. *Public Health Service* : The district officer is in charge of the measures against infectious diseases in the district, receives certificates of infectious diseases, filled in by the practitioners of the district, and communicates them to the central health service.

Visits cases of infectious disease notified to him, and decides upon the hygienic conditions and measures of isolation and disinfection required.

Orders and supervises the execution of the necessary measures of disinfection ; usually orders the disinfection of all excreta.

Supervision of foodstuffs and of the cleanliness of markets, butchers' shops, pastrycooks' shops, restaurants and public premises ; supervision of hygienic conditions in town and country, in farms and industrial establishments.

Health inspection of schools.

4. *Other Duties* : Medical inspection to determine the degree of disablement of sick and wounded soldiers applying for pensions ; medical inspection of army recruits in the town and district.

Apart from these official duties, the district officer is also director of the Jelgava Red Cross Section, chief doctor of the Red Cross Hospital and director of a sanatorium for consumptives erected near Jelgava. He also has a private practice of his own.

Official Reports and Returns to be sent to the Department. — Has no office of his own for his duties as district officer. Deals with all the returns himself. Sent 1,123 notes or printed documents to the Department between January 1st and December 11th, 1924.

He has to send in the following returns to the Department :

Every week, the notification certificates of infectious diseases.

A detailed report of each case of abortion brought to his notice, whether criminal or not. There have been 107 cases of abortion reported since January 1st, 1924. Cases not followed by illness are not usually notified. The figures for abortion are thus below the real number.

Special reports on each health inspection ; approximately every three months.

Every month a report on the prevalence of venereal disease on the basis of the forms received from the district doctors, giving the diagnoses without the names of the patients. In October 1924, this report notified 39 new cases of venereal disease, of which 10 were syphilis and 16 gonorrhœa.

A report summarising his work during the month.

Special Cases. — Cannot obtain a bacteriological diagnosis on the spot ; would have to send the specimen to the laboratory of the Riga Hospital ; but has never done so.

Has the legal right to isolate in a hospital, with the assistance of the police if necessary, any patient suffering from an infectious disease ; has never had to use such compulsion, as the parents or patients never refuse removal to hospital.

Had six cases of typhus fever in the town and district in 1923, among refugees from Russia.

Takes the opportunity of journeys necessitated by his duties as forensic doctor to carry out health inspections in the different parts of his district.

Salary : *(a)* 196 lats per month ; and 16 lats for each child under sixteen ;

(b) Travelling allowance per day for absences exceeding 12 hours, 8 lats. Free conveyance by public services.

District of Daugavpils.

General Information. — The district of Daugavpils, in the province of Latgale, is in the south-east of Latvia, on the frontiers of Russia, Poland and Lithuania.

It has an area of 4,810 square kilometres. Its population has been diminished by the war ; from 312,600 inhabitants in 1914, it fell to 182,985 in 1920. It has since partially recovered ; on January 1st, 1924, it had 216,500 inhabitants, making 45 per square kilometre. This is one of the most populous districts in Latvia, which on an average has 29.02 inhabitants per square kilometre.

It is situated on the right bank of the Daugava (Dvina) in a plain of some fertility. In the eastern part of the district there are numerous lakes of glacial origin.

The chief town is Daugavpils ; of the other towns the most important are Krustpils, with 3,400, Livani, with 2,000, and Kraslava, with 6,000, inhabitants. It contains twenty-one communes.

Daugavpils (Dünaberg, Dvinsk), founded in 1582, formerly a Russian entrenched camp, was the capital of a district in the Government of Vitebsk. It is situated on the right bank of the Daugava. It is a big market for flax and wood, and an important railway centre. It has two railway-stations, the Riga station for Riga and Moscow, and the south-west station for Petrograd, Wilna, Wirballen and Warsaw.

Its population fell considerably during the war. In 1914, it was 110,000 inhabitants ; in 1922, 36,493, and in 1924, 40,000, of whom 55.6 per cent were Jews and 18.8 per cent Great Russians.

Daugavpils and its district suffered severely during the war. For eight years it remained in the thick of military operations, and was occupied in turn by the Russian, German, Polish and Bolshevik armies.

In 1920, two-thirds of the houses were in ruins ; those which still stood contained heaps of rubbish and detritus which took a long time to clear away. A large number of roofs had fallen in ; many of the window-panes were broken. The central part of the town, the bazaar, consisting of small wooden houses, was not damaged, but the outer parts, in which the houses were larger and of brick, suffered severely.

In 1919, the Bolshevik invasion and the Red Terror added to the sufferings of the town, using up the last resources and exterminating all the well-to-do and educated inhabitants. In a single night 89 bourgeois were shot, among them being the district medical officer. After the departure of the Red troops, all that remained in the town were the Jews and a few communities of White Russians in the most abject poverty.

The White Russians of Daugavpils belong to the Russian religious sect of "Staroobriadzy". They are poor, superstitious and mistrustful — very difficult for doctors to deal with. A story often told is that they give the medicine with which they are supplied free of charge to the cat in order to observe its effects. If it disagrees with the animal they accuse the doctor of trying to poison the patient.

The Jews of this region, like those of the former government of Vitebsk, are poorer, more backward and less educated that those of the Baltic countries. They are concentrated in the bazaar, in the central part of the town. They live in small wooden houses huddled together round the market-place. These houses are low, with only one floor, dirty and overcrowded. At night they shelter large numbers of people, who sleep on the floor in complete promiscuity. In the day-time they are transformed into shops, restaurants or workshops for small trades.

The streets are narrow and without gutters. Large numbers of peasants come in to market. They arrive in low four-wheeled carts, drawn by horses, which are aligned wheel to wheel in the market-place. They lay out their wares on the floors of these carts. Cattle and dogs, men and animals throng the square and welter in the dust or mud and among the heaps of rubbish and dirt of this ill-kept market-place.

The Jewish population is somewhat refractory to the rules of hygiene. When given advice, they only smile ; police measures and punishments are alike greeted with indifference and occasional complaints : " Leave us alone, it is no good ; we have done the same for two thousand years, and we have no bread in the larder and no wood for our fire. " Their clothes are old and dirty ; they only discard them when they are absolutely falling into rags.

In 1922, a flood caused fresh damage. Blocks of ice floating down from the thaw became piled up across the river and formed a dam. The water rose behind this barrier and invaded the lower part of the town. Fifty-two houses were flooded. They are being slowly rebuilt.

Health Condition. — Notwithstanding these unfavourable hygienic conditions, the health situation, as shown by the official statistics, is comparatively satisfactory.

In 1923, the total number of deaths was 3,222 and the number of births 6,367, giving an excess of 3,145 births over deaths. The province of Latgale had 14.89 deaths per 1,000 inhabitants in 1923, as compared with 13.66 for the whole of Latvia.

The contagious diseases notified in this district were as follows :

	1922	1923
Smallpox	4	4
Typhus fever	419	98
Relapsing fever	19	2
Typhoid fever	96	83
Dysentery	156	12
Malaria	2	1
Measles	74	88
Scarlet fever	106	200
Diphtheria	49	48
Epidemic cerebro-spinal meningitis	5	30
Hydrophobia	1	0
Leprosy	0	0

The drinking-water of the town of Daugavpils comes from the Daugava. It goes through submerged sand-filters ; these filters, numbering four, have been in use since 1914. No information is available regarding their condition and their effect. The water is not purified in any way.

No bacteriological supervision is exercised over this water ; bacteriological analyses can only be carried out at Riga.

The waters of the Daugava are fouled by the lumbermen who take down the numerous rafts of wood coming from Russia.

A considerable number of houses possess shallow wells whose water is used for drinking purposes.

Drains. — There is a drainage system of small extent which serves only the centre of the town and leads into the river below the town.

Typhoid infections are endemic ; they increase during the summer (100 cases in August and September 1924). Typhoid fever is rare in the rural districts, but more frequent in the towns.

The same applies to *dysentery*, which was, however, comparatively rare in the summer of 1924.

Tuberculosis is quite common and as prevalent in the towns as in the country. No campaign has as yet been organised against its propagation. Serious cases are not isolated ; there is no dispensary for early diagnosis and for the treatment of consumptives at the beginning of the disease. All that is done is to disinfect the dwelling of a consumptive after his decease. It is not infrequent to see a serious consumptive case living in the same room as five or six other persons. The wretched and superstitious population do not realise the dangers of contagion of tuberculosis and rarely pay any attention to advice.

The notification of tuberculosis is only obligatory as a cause of death.

Syphilis. — Notification without indication of the identity of the patient is obligatory ; but few cases are notified. Syphilis largely increased after the war. The Wassermann test can be carried out at Daugavpils by a private laboratory approved by the Department of Health. The employment of organic arsenic compounds in the form of intra-venous injections is frequent.

Smallpox. — Only one case in the last year ; vaccination has been compulsory for more than twenty years. The vaccine is supplied free of charge by the Department of Health.

Puerperal fever is rare ; two deaths in 1923 in the whole district.

Deliberate abortion is somewhat frequent. Four cases were prosecuted in 1923. In November 1924, two midwives were in prison on charges of attempts at abortion.

Trachoma. — Prevalent in the rural parts of the district. Fifty per cent of the pupils of a school in the commune of Kolops are suffering from trachoma. It is also comparatively frequent among adults. Soldiers suffering from trachoma are formed into special companies. Official notices have been published warning the population against the dangers of this disease.

During the summer a medical caravan under Dr. Reinhart, professor at Riga, travels through the countryside of Latgale. It attends trachoma patients and inculcates a few of the principles of hygiene. Latgale is the province of Latvia which has the largest number of cases of trachoma.

Health Equipment of the Town and District of Daugavpils.

Number of doctors . . .	in the town . .	38	
	in the district .	18	
	Total . .	56	including 2 at Krustpils, 4 at Kraslava, 2 at Livani.
Number of Dentists			
Number of Chemists		29	
Number of Hospitals.		8	including 3 of from 8 to 10 beds each in the district and the following 5 at Daugavpils, with a total of 346 beds :

1. A lunatic asylum, with 36 beds, which is being enlarged and will eventually contain 200 beds ; it belongs to the State.

2. The town hospital, belonging to the municipality, with 75 beds. It possesses wards for infectious diseases and for venereal diseases ; it is the only hospital in which treatment is given to prostitutes.

All cases of infectious diseases in the town and district requiring isolation are brought to this hospital.

3. The district hospital, with 75 beds, which receives all patients except those suffering from infectious or venereal diseases.

4. The military hospital, with 100 beds.

5. The Red Cross Hospital, with 60 beds, new and up to date, with all modern appliances and a surgical department, a maternity department and a radiographical room. This is a very busy hospital.

There is no longer any system of consultation for infants or any crèches or infants' homes in either the town or the district. The various institutions created by the American Red Cross in 1921 are closed ; they distributed medicine, milk and clothes.

Malernily. — Four hospitals in the town have an obstetric service ; that of the Red Cross is the most patronised. There are 36 qualified midwives practising in the district, 13 in the towns and 17 in the country.

Bacleriological Laboralories. — No important bacteriological analysis, except the Wassermann test and a certain number of sero-diagnoses, can be carried out at Daugavpils.

Disinfection Service. — In the town of Daugavpils, there is a disinfection station with a steam boiler and a sulphur fumigation chamber ; and one vapour-bath establishment (Russian vapour-baths), which can be used for delousing. This bathing establishment is private, but could be requisitioned in case of necessity.

The available facilities appear inadequate for the rapid and thorough disinfection of a large number of people. A disinfection station with shower-baths ought to be

established in this town, which is so close to the frontier, and is so important a railway centre.

In the country, disinfection is carried out by sulphur or formalin fumigation of hermetically-sealed rooms.

Disinfection and delousing are carried out by means of a hermetically-sealed chamber with a wood fire and mounted on wheels, which can be moved about the country. In 1924, this disinfection cart made ten tours through the rural districts.

Duties of the District Officer. — The nearness of the frontier renders the duties of the Daugavpils district officer particularly important from the point of view of the general health of Latvia. At present railway traffic with the neighbouring countries, Russia, Poland and Lithuania, is not very great. On the other hand, there is a considerable amount of traffic in summer on the Daugava, down which numerous rafts of wood are floated from Russia (about 3,000 in the summer of 1924).

The district is of considerable extent. Daugavpils is approximately in the centre of the district, 70 kilometres from Indra on the Russian frontier to the east, and 90 kilometres from Krustpils in the north.

The duties of District Officer are at present performed by Dr. Kreteer. They may be summarised as follows :

(a) In connection with the Police : Miscellaneous inspections and examinations of bruises, blows and wounds. Medical opinions on labour accidents (disablement), 37 in November.

Medical supervision of the Daugavpils prison and attendance of prisoners. There were 642 prisoners, including 52 women, detained in this prison between January 1st and November 15th, 1924. Robbery under arms and murders with a view to theft are not infrequent in this district. Prisoners are deloused on their arrival and isolated for fifteen days. The prison possesses an infirmary and a sanatorium for the sick. For the last two years there has been no epidemic in this prison.

(b) In connection with Justice : Expert opinions at the assizes and the law courts. Medico-legal advice. Post-mortems and reports on all suspicious cases of death, sudden deaths and deaths which take place before twelve days' treatment in a hospital. Cases of food poisoning, giving rise to serious illness, are of some frequency.

(c) In connection with the Public Health Service :

1. Health Police : Inspection of foodstuffs ; inspection of markets, shops and badly-kept restaurants. Fraudulent practices in regard to food are frequent, and uncleanliness in shops selling food is habitual. Two or three inspections of this kind, lasting three to four hours, are carried out each week. The average number of prosecutions is twenty (butchers' shops, dirty clothes of salesmen, premises in a dirty condition ; meat hung on dirty or rusty hooks, offal and rubbish thrown upon the floor, personal uncleanliness, etc.).

In 1923, a vendor of iced drinks, who prepared ice in his booth under the most disgraceful conditions, was the cause of a local epidemic of typhoid fever.

2. Supervision of epidemic diseases : Receives notification certificates of infectious diseases from the practitioners of the district ; collects them and sends them to the central administration.

The doctors do not readily comply with the regulations on the notification of contagious diseases. They do not want the patient to be isolated in the hospital, as this deprives them of a client. The notifications are made with greater punctuality in the country than in the town.

Inspects patients' houses and decides on measures of disinfection and isolation which may be necessary.

Contagious cases may be isolated compulsorily with police assistance, if the parents or patients resist isolation. In the last three years, compulsion has had to be used thirteen times — ten times in the country and three times in the towns.

Inspects schools, industrial establishments, etc.

3. Health Supervision of the Daugava : Is responsible for seeing that the regulations for the health supervision of waterways are properly carried out at the river quarantine station of Indra, at the point where the Daugava enters Latvia.

The duties of the district medical officer include all the work of application, supervision and inspection connected with the general health regulations, the municipal health police regulations, and the ordinary police regulations ; the control of all the legislative measures governing labour hygiene, the protection of workmen, the supervision of waterways and of the water-supply, school hygiene, the supervision of infectious diseases, the application of isolation and disinfection measures, and in general all measures aiming at protection of public health.

He must move rapidly from one part of the district to the other and exercise his influence rather by his personal presence and advice than by correspondence. But the districts are extensive, and travelling is often difficult.

To these duties, which are more particularly connected with public health, have been added others relating to justice, police and several other administrations.

It would be a good thing to make the district medical officer more of a specialist, by dividing these various duties and entrusting him only with those specially connected with public health.

II. Municipal Medical Officers.

1. *In the Communes.* — They are appointed by the district medical officer on the nomination of the health commission of the municipal council.

The health commission of the commune is presided over by the district or municipal medical officer. It has to study all health questions concerning the municipal administration : salubrity of dwelling-houses ; supply of drinking-water ; evacuation of rainwater and foul water ; stabling of animals ; building permits, repair of houses ;

prophylaxis of transmissible diseases ; isolation, conveyance of the sick, disinfection ; supervision of foodstuffs ; municipal health institutions and organisations (hospitals) ; school hygiene. It is responsible for drawing up the municipal health regulations. The drafts of these regulations are submitted to the central health administration and to the Minister of the Interior for approval.

The municipal council passes the municipal health budget. .

The municipal medical officers are responsible for all measures of execution, supervision and inspection arising out of the general health regulations and the municipal health police regulations in the commune.

2. *In the Town of Riga.* — The health service of the town of Riga is placed under the authority of the health commission of the town. It is divided into twelve sections and employs seven doctors, who superintend the execution of the municipal health regulations in the thirteen health districts of the town.

III. Public Health Officials and Staff who work in close Relation with the Health Services.

The Health Service of Latvia employs no *sanitary inspectors* or *sanitary engineers.* When necessary, it calls in the services of experts to deal with special questions.

Hospital attendants. — The recruitment and training of hospital attendants is not subject to any regulations. Each hospital and each institution follows its own rules. The attendants are for the most part domestic servants and belong to the poorer classes. Their monthly wage is from 87 to 95 lats. The Riga Military Hospital trains military hospital orderlies.

Hospital Attendants (Women) and Nurses. — Two schools for women hospital attendants have been created in Latvia, one by the Red Cross at Riga and the second at Liepaja (Libau).

The Red Cross School for Nurses at Riga was founded in 1921 in the Red Cross Hospital. Girls entering this school must have followed a course of secondary education ; they generally come from the middle classes. The pupils are given food and quarters in the hospital, and they attend the patients. After two years' study they undergo an examination for a diploma. Twenty-five nurses have been awarded this diploma. Their salary is 80 lats per month.

Apart from these nurses, the Red Cross has trained about three hundred voluntary nurses.

The Red Cross is taking steps to extend this school for nurses. It has recently created several posts for nurse inspectors.

The Liepaja (Libau) School for Nurses is established in the Liepaja town hospital. The course lasts for two years and is followed by fourteen students. An official diploma is awarded to them on passing an examination.

Staff of the Disinfection Services. — The employees of the disinfection service undergo a period of practical training before entering on their duties.

Taken as a whole, the minor staff of the health services is still deficient in technical training. Much remains to be done as regards recruiting and training this minor staff, whose services are indispensable to the development of the health organisation, and as regards improving their status and increasing their numbers. Only the trained nurses of the Red Cross are equal to the performance of any duty of which a nurse should be capable.

Midwives. — There are 831 midwives in Latvia. Of these, 336 live at Riga, 150 in other towns and 345 in the country. A school of obstetrics has been founded at Riga. Candidates for admission to this school must be between twenty-one and thirty-five years of age and hold the diploma awarded after six years' secondary education.

Chemists. —	" Magisters "	19
	Responsible managers	226
	Assistant Chemists	307
	Apprentices	36

Students in pharmacy follow the courses of the Faculties of Medicine and Chemistry. The University of Latvia has no special school or faculty for pharmacy.

Veterinary Surgeons. —	Qualified surgeons	78
	Assistant surgeons	108

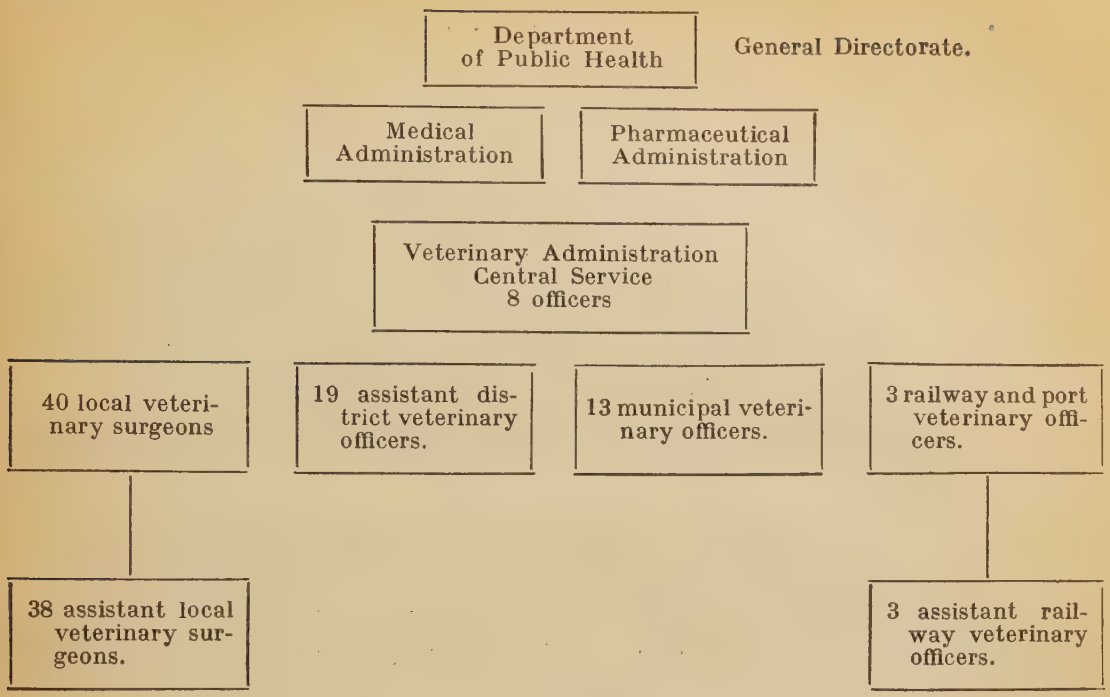
They are responsible for the health inspection of animals, the campaign against epizootic diseases, and the inspection of slaughter-houses.

The appended plan shows the principal divisions of the veterinary service and the statistics given below indicate the extent of their activities.

They assist the health service of the State and of the towns. The salary of veterinary surgeons attached to the health service is from 87 to 194 lats per month.

Veterinary Service.

Ministry of the Interior.


Department of Public Health
General Directorate.
Medical Administration
Pharmaceutical Administration
Veterinary Administration Central Service 8 officers
40 local veterinary surgeons
19 assistant district veterinary officers.
13 municipal veterinary officers.
3 railway and port veterinary officers.
38 assistant local veterinary surgeons.
3 assistant railway veterinary officers.

Infectious Diseases of Animals in 1923

	Cases
Rabies	308
Glanders	58
Anthrax	84
Tuberculosis	412
Hæmorrhagic septicæmia	130
Cow-pox	34
Piroplasmosis	50
Swine fever	2,639

847 animals were destroyed.

Slaughter-houses. — In Latvia, there are 34 public and 23 private slaughter-houses, in which the following numbers of animals were slaughtered and inspected in 1923.

	Public slaughter-houses	Private slaughter-houses
Cattle	86,178	31,397
Calves	77,008	111,064
Sheep	95,712	117,181
Pigs	3,042	87,197

Part 2.

IV. HEALTH PROTECTION.

The measures taken to combat infectious diseases constitute one of the essential factors in the health legislation of a country. Their importance is the greater inasmuch as they also affect the safety of neighbouring countries.

Under this heading, " Health Protection ", it is proposed to give some account of the supervision of infectious diseases, the measures taken against their propagation, the resources available to combat them, the evolution of these diseases in Latvia and the principal health problems which they involve in that country.

I. Supervision of Infectious Diseases.

Since the creation of Latvia, the Department of Public Health has published several regulations and decrees on the prophylactic and other measures to be taken against infectious diseases.

The Health Legislation Commission which it has set up proposes to revise and amalgamate all the regulations dispersed in the different decrees in a single law on the prophylaxis of communicable diseases.

A. *Notifiable Diseases.*

The following diseases are subject to compulsory notification :

1. Typhoid fever.
2. Typhus fever.
3. Relapsing fever.
4. Malaria.
5. Smallpox.
6. Measles.
7. Scarlet fever.
8. Whooping-cough.
9. Diphtheria.
10. Puerperal fever.
11. Asiatic Cholera.
12. Anthrax.
13. Dysentery.
14. Epidemic cerebro-spinal meningitis.
15. Mumps.
16. Leprosy.
17. Hydrophobia.

Tuberculosis and syphilis are not included in this list. These diseases, which are endemic in Latvia, are to be made subject to special regulations. Tuberculosis is at present notified as a cause of death. Syphilis, as soon as its presence is discovered, is notified on a special certificate which gives the diagnosis of the form of the disease without indicating the name or identity of the patient. Certain diseases which have some importance from the epidemiological point of view are not included in this list; *e.g.*, trachoma, which is nevertheless very prevalent in the province of Latgale ; epidemic encephalitis, influenza, acute anterior poliomyelitis, ringworm and plague.

A special regulation provides that, in cases of plague and cholera, the obligatory notification must be telegraphed direct to the Department of Public Health.

Medical practitioners have a book of forms for the notification of these diseases. It is their duty to fill in all the information required on these forms, and send them without delay by post to the superintendent of the district health service in the country and to the superintendent of the municipal health service in the case of towns. These forms may be sent post free.

The superintendents of the district and municipal health services send the notification forms which they have received during the week to the Department of Public Health (Statistical and Epidemiological Bureau).

Penalties are provided for doctors neglecting to notify cases of infectious diseases coming under their observation.

In cases of epidemics or other urgent cases, notification must be sent by telegraph and be accompanied by observations and information regarding the centre of infection.

These regulations regarding the notification of epidemic diseases are, as a rule, faithfully observed, except in the case of the slums of certain towns.

The regulations in force empower the Government authorities to take various health measures in case of danger of epidemics.

B. *Isolation.*

Measures of isolation are ordered by the district medical officer and are carried out under his supervision.

They are compulsory in all cases of plague and cholera, but are optional for all other infectious diseases, when they are only ordered if the patient cannot be isolated at home. They may be enforced by police action. Lepers are isolated in special asylums. Special regulations, an account of which will be given under the heading " Leprosy ", govern the conditions of this isolation.

The present regulations give the health authorities legal powers permitting them, in cases of epidemics, to close schools, to forbid public meetings and to close theatres and cinemas.

II. Protection against Infectious Diseases introduced from Abroad.

Measures of protection against the importation of infectious diseases from abroad are laid down in the general regulations which govern maritime quarantine, the supervision of land frontiers and waterways, the frontier quarantine stations, and the supervision of emigrants and refugees, and which provide for the application of the decisions of the International Health Conference of Warsaw, March 1922. This Conference improved the organisation of the epidemiological intelligence services of the different States and the system of direct co-operation between the health services of the frontier districts.

(a) *Maritime Quarantine.*

(b) *Supervision of Waterways.*

The organisation of these services is outlined in Part I, Section II, under the headings " Authorities responsible for Health in Ports " and " Supervision of Waterways. "

(c) *Supervision of Emigrants and Refugees.*

There is a continuous movement of population from Eastern Europe to Latvia, although it has now somewhat abated. On the one hand, there are emigrants from Soviet Russia proceeding to America and, on the other, there are Latvian refugees who fled to Russia during the war and are now returning to their own country.

A. *Supervision of Emigrants.*

The destination of the great majority of emigrants was the United States. In the last few months, a new series of regulations have almost put an end to this emigration. The number of emigrants admitted to the United States is determined in respect of each year and each nationality on the basis of the emigration in past times from that country to the United States.

In the case of Russia, the number of emigrants admitted is based on the number of Russian emigrants in the United States in 1912. In practice, emigration to the United States has ceased. At present emigrants from Russia go to Canada, Mexico, Chile, Peru and the other countries of South America.

The emigrants do not stay long at Riga, though they are sometimes detained if the conditions of embarkation are not fulfilled. The restrictions placed upon emigration into the United States kept 2,000 refugees at Riga for a year ; they were gradually absorbed by the other towns and by the rural districts.

The shipping companies, for which emigration was an important source of income, had built houses for emigrants at Riga. These houses were constructed on hygienic principles ; they had a disinfection station, and could shelter as many as a thousand emigrants at a time. They are now closed. The Wester-Linie, the Cunard Line and the Société Baltique had established sorting and medical inspection centres for

emigrants. The qualifications demanded were based on the American regulations. Latvian doctors in the service of these companies carried out the inspections before embarkation. The emigrants were then sent to the port of embarkation of Liepaja (Libau), where they were inspected a second time by an American doctor.

A certain number of emigrants suffering from cutaneous, ocular or scalp lesions are under detention at Riga. Ringworm is not rare ; it is treated at Riga by X-rays. Sick emigrants are admitted to the town hospitals.

Regulations. —The health regulations on emigration are determined by the Department of Public Health, which inspects and superintends the emigration service of the shipping companies. The Ministry of the Interior has an emigration section which co-operates with the Department of Public Health.

Emigrants coming from Russia are not at present stopped at the frontier to be kept under observation or in quarantine. They are taken directly to Riga in special carriages attached to the ordinary trains, and are conducted to the disinfection station of the " State Hostel for Emigrants and Refugees " (No. 11 City General Hospital).

After disinfection, they are admitted to this hostel and allowed free access to the town. Before the hostel was opened on May 16th, 1924, they were taken to the premises of the shipping companies for disinfection.

The expenses of upkeep, delousing and inspection of the emigrants are borne by the shipping companies.

Number of emigrants in	1919	8
	1920	17,854
	1921	134,778
	1922	30,871
	Total	183,511

The *State Hostel for Emigrants and Refugees* is established in the hutments for contagious diseases of No. 2 City Hospital (west suburb). The disinfection station is in perfect working order. It is able to deal with 500 emigrants.

Number of emigrants:
- Admitted since May 1924, 400 to 450 per month.
- Admitted on November 19th, 274, including 85 Mainonites from the Ukraine, the Don, the Volga and the German colonies at Samara.

B. *Supervision of Refugees and Repatriated Latvians.*

In 1915, at the time of the German advance into Latvia, the Russian authorities systematically laid waste the country before the advancing enemy, burning the farms, removing the factory plant, and forcing the population to withdraw into the interior of Russia.

This emigration into Russia reduced the population in a year by about 40 per cent. Before the war, it was 2,552,000, and only 1,563,193 in June 1920.

The Latvian exiles returned from Russia in large numbers after the treaty concluded with the Union of Socialist Soviet Republics in August 1920. The movement increased rapidly in 1921 during the famine which was devastating Russia.

Since 1923, the number of returning exiles has been falling off each month.

Movement of Refugees :	*Refugees.*
1919	8,700
1920	91,132
1921	94,818
1922	21,204
1923	6,088
Total	221,942

This migration westwards from Russia was one of the principal causes of the diffusion of the various epidemic diseases and of typhus fever in Latvia, as in Poland and on all the western frontiers of Russia. The influx of returning exiles reached its maximum in 1920 and 1921, and was very large in proportion to the population of Latvia (184,000 refugees for 1,596,131 inhabitants). It was also during these years that typhus fever made the most victims (4,631 in 1920).

The refugees entered the country by two railway lines, one running through Vielikije, Zilupe and Rezekne (Rositten), and the other through Ritupe, Daugavpils and Abeliai.

Among them were Lithuanians returning to their country who were sent through Rositten and Dvinsk to Kalkuni, and from there transferred to a Lithuanian train and conducted to the Abeliai quarantine station. The Latvian refugees were isolated, cleaned and disinfected at Rositten.

The following table shows the number of refugees who entered Latvia through Zilupe and through Ritupe and Daugavpils :

	Through Zilupe.	Through Ritupe and Daugavpils.
1919	4,638	—
1920	63,392	20,048
1921	42,391	32,143
1922	11,860	3,852 + 104
1923	3,072	495
Totals	125,353	56,538 + 104

Effect of the Movement of Emigrants and of Refugees and Repatriated Exiles on the Public Health of Latvia.

The epidemiological situation of Eastern Europe has improved during the last two years. The number of returning exiles and emigrants has considerably decreased.

It is still necessary, however, to pay careful attention to emigrants going from the east to the west, and to continue to apply the measures recommended by the Warsaw Conference of March 1922. Typhus fever still persists in the endemic state in certain areas of the Union of Socialist Soviet Republics ; a certain number of cases were observed in Latvia in 1923 on the routes followed by the emigrants and refugees, and in the districts near the eastern frontier (303 cases in Latgale in 1923, 81 cases in Latvia in March 1924). Fresh cases may arise among people using the stations and carriages previously occupied by emigrants and refugees.

III. Health Equipment.

Under this heading is outlined the methods of disinfection, isolation hospital treatment and diagnosis.

A. *Disinfection and Disinseclisation.*

Latvia possesses several disinfection and disinsectisation centres, capable of dealing with a large number of cases. They are distributed as follows :

At Riga. — The City Disinfection Service has been in existence for thirty years. Staff : ten employees. Apparatus : two steam ovens of large type, one of which employs both steam and formol ; sealed chamber for formol or sulphur fumigation. On an average 20 cubic metres of linen belonging to patients in the town are disinfected each month. Disinfection is free in the case of compulsorily notifiable diseases.

This service undertakes the disinfection of premises in the town by formol or sulphur fumigation. On an average, 140 premises per month are disinfected.

The average cost of disinfection is 9 lats 81.

The City Shower-bath and Disinfection Station, founded in 1913. — Staff : eight employees. Appliances : undressing-room ; the clothing, provided with numbers, goes through a mangle and is placed in a brick drying-oven heated to 120° C. The oven consists of a cube of masonry divided into compartments. The visitors go into the shower-bath room and receive their disinfected clothing in separate cabins. The exit is on the opposite side to the entrance.

Persons sent to this station by the health services, school-children, soldiers and the inmates of asylums are admitted free of charge.

Charge for disinfection , 0 lats 10.

Receipts : 6,271 lats. Expenditure : 17,236 lats.
Average cost of delousing, 22 lats 13.

Disinfection Station of the State Hostel for Emigrants and Refugees (No. 2 City General Hospital).

Shower-bath and disinfection stations of the shipping companies' emigrants' hostels.

At Liepaja. — The Disinfection and Delousing Station of the Maritime Quarantine Service.

At Daugavpils, Rezekne, and Jelgava, a disinfection station with steam oven and vapour baths. These stations are on a smaller scale.

Several sanitary cars with shower-bath apparatus and steam ovens are stationed at Riga, and may be sent to any point where they are required.

Some districts are provided with a horse-drawn, dry-air oven which can go from place to place in the countryside.

The disinfection and delousing stations must be kept up and improved. Several stations which we visited had no premises to isolate and shelter the refugees before delousing and no sufficient appliances for washing their persons while their clothes were being disinfected.

The premises frequented by persons infested by parasites (railway-carriages and waiting-rooms, reception- and waiting-rooms in the delousing stations) must be carefully disinfected as soon as the patients have left. Failing this precaution, these premises become centres for the diffusion of diseases transmitted by lice.

Cases of phthiriasis are at present rare. It is thought, however, that Daugavpils, being an important railway centre, should be provided with a disinsectisation station and a delousing station, the facilities available in this town being at present inadequate.

Deratisation. — The ports have no apparatus for destroying rats on vessels.

B. *Hospitals for Infectious Diseases.*

Provision for the isolation of infectious cases is one of the problems with which the health administration of Latvia is now faced. The administration has 564 beds at its disposal for cases of this kind distributed among the infectious wards of these hospitals. There are no special hospitals for infectious diseases. Thirteen general hospitals — five in the large towns and eight in the provinces — possess buildings for infectious cases with 564 beds. Latvia possesses 77 hospitals, with a total of 6,200 beds.

The premises set apart for contagious diseases are antiquated and inadequate, *e.g.*, at the Daugavpils Town Hospital and at No. 1 General Hospital at Riga.

Before the war, infectious diseases in the Riga district were treated at No. 2 General Hospital, to the west of the Daugava. This hospital, built in 1910 on the most modern lines, had 1,100 beds, 29 separate bungalows raised above the ground level, and a special division for infectious diseases. This division was separate from the General Hospital and had its own staff, organisation and drains.

This hospital was occupied during the war by foreign troops, and the furniture and equipment were removed. It is absolutely indispensable to the health organisation of Riga and Latvia, and it is to be hoped that it will soon be re-opened.

Patients are isolated under the best conditions in the infectious wards of the Riga Children's Hospital, in the Liepaja Maritime Quarantine Station, and in the Liepaja Military Hospital.

The following are a few details regarding the arrangements made for the treatment of infectious diseases at the Riga Children's Hospital in the quarter west of the Daugava.

City of Riga Children's Hospital. — This model hospital was built in three stages. It cost 460,000 gold roubles twenty-five years ago, covers a surface of seven hectares, and consists of separate brick buildings. In the centre are the kitchen and the steam heating apparatus, connected by covered passages with the principal buildings.

All the rules of hospital hygiene for the treatment of children were observed in building this hospital — isolation of patients when they attend consultations and while they are being registered ; a separate entrance for diphtheria cases and another for scarlet-fever cases ; protection at the entrance to the building against external contamination ; clean overalls and shoes ; compulsory washing of hands. Separate buildings for each infectious disease, and isolation in each building in small rooms with two beds, and with six to eight beds for convalescents ; separate doors. The outer doors of certain buildings (diphtheria, scarlet fever) are kept locked and free access from the outside is impossible. The floor is of washable tiles. The smallest rooms are of 57.78 cubic metres ; each room contains a wash-basin for disinfecting the hands and cupboards for every bed, with the articles required by each patient.

The diphtheria building contains a hot vapour room in which children after tracheotomy are placed. On an average, twenty tracheotomies are performed every year on children brought in in a state of asphyxia.

Director : Dr. Petterson.

Staff : 13 doctors, including Professor Gartje, of the Clinic of Infant Diseases ; 1 chemist ; 16 nurses with the Red Cross diploma ; 130 attendants and servants ; 121 other staff.

Income : 223,861 lats. Expenditure : 495,455 lats, the cost of a day's attendance being on an average 3.95 lats.

430 beds ; on November 19th, 1924, 341 patients.

Divisions.

a' General surgery : 76 patients.
b' General medicine : 33 patients, children above two years of age.
b'' General medicine : 14 patients, children less than two years of age.
d' Diphtheria : 10 patients.
d'' Gonorrhœal vulvitis of new-born infants : 46 patients.
e' General cases : 16 patients.
e'' Scarlet fever : 47 patients.
e''' Surgery : tuberculosis of the bones : 24 patients.
f Home for indigent mothers and infants : 32 patients.
2 Home for abandoned children : 23 patients.
3' Isolation department for smallpox.
3'' Isolation department for whooping-cough : 20 patients.
3'' Special degrees of isolation.
3'' Observation of patients having occupied beds next to suspected cases.

Other Departments.

Consultations : 11,907 consultations given in 1923.

X-ray surgery { 339 radiographies, 160 X-ray treatments, 4,670 photographs } in 1923.

Quartz lamp.
Laboratory of clinical bacteriology.
Numerous bath-rooms in the various departments.
Steam laundry : disinfection service.
Cowhouse with seven cows tested against tuberculosis, whose milk is reserved for the infants.

Treatments and results obtained.

Year	Number of patients treated	Number of days' treatment	Number of deaths	Percentage of deaths
1920	3,190	98,923	305	9.56
1921	3,388	108,901	193	5.7
1922	2,637	106,851	165	6.2
1923	2,806	125,965	162	5.77
In 25 years	60,035	1,632,834		

Remarks : A model hospital, kept and managed with remarkable efficiency.

The isolation of contagious cases in farms in the country is usually difficult. Often isolation can only be effected by taking the patient to hospital in the nearest town. It is to be hoped that the health administration will be able to arrange for such conveyance.

C. *Laboratories of the Health Services.*

To attempt to carry on the public health services of a country without bacteriological and chemical laboratories is to run the risk of employing measures of protection with some degree of uncertainty, of overshooting or of falling short of the mark, and of having to dispense with exact information.

These laboratories should play an essential part in the health service either by making analyses of value in the diagnosis and treatment of patients or by carrying out researches of general interest, such as epidemiological enquiries, biological studies of drinking-water, milk, meat, preserved foods, drugs, etc.

Small district laboratories are sufficient to carry out the first series of analyses, but a central public health laboratory seems necessary to undertake the second series of researches and to direct and control the district laboratories.

This branch of medical technique is comparatively undeveloped in Latvia.

For the diagnosis of infectious diseases of men and animals there are only two laboratories, both at Riga : the Bacteriological Laboratory of the Faculty of Medicine and the Microbiological Institute of the Faculty of Agriculture.

The clinics of the hospitals each have indeed a laboratory for the simplest examinations ; but these laboratories are in such a state of poverty and destitution that the most elementary bacteriological research is difficult.

1. *Bacteriological Laboratory of the Faculty of Medicine*, directed by Professor R. Adelheim (Assistant, Dr. Kartin).

Before the war this laboratory was established in No. 2 General Hospital near the Anti-Rabies Institute. It had been liberally provided with stores and apparatus. All the material was removed and the laboratories had to be re-installed with some difficulty in a building belonging to No. 1 General Hospital. Both laboratories are under the same director ; they have no budget of their own, and are administered by No. 1 Hospital, to which they constitute an annex.

Functions.— (a) Carries out official bacteriological and epidemiological researches.

(b) Carries out the clinical analyses requested by the hospitals, the doctors of the municipal health services and of the schools, and the district medical officers. There is no special organisation for the collection and despatch of specimens. Number of analyses carried out in 1923 : 1,631.

(c) Carries out the Wassermann test according to the original method of Bordet and Wassermann, recommended by the Copenhagen Conference of 1923. Number of Wassermann tests in 1923 : 5,646.

The resolutions of this Conference are applied in Latvia ; only doctors authorised by the Department of Public Health and approved by Professor Adelheim may carry out Wassermann tests for the public. Seven doctors are authorised for this purpose at Riga, 1 at Liepaja and 1 at Daugavpils.

(d) Prepares anti-typhoid and anti-cholera vaccine for the army by the Kolle method (cultivation on gelose, emulsions, heating to 58 degrees) and the auto-vaccines which may be requested.

(e) Makes occasional analyses of drinking-water for the municipalities.

(f) Anti-Rabies Institute. The only one in Latvia. Founded in April 1914. The virus came from the Pasteur Institute at St. Petersburg. On November 15th, 1924, it had had 3,541 animal passages. Number of persons vaccinated against hydrophobia in 1923 : 769.

Dr. Adelheim, Professor of Pathological Anatomy, gives five lessons of theory and eight practical lessons a week at the Faculty.

The equipment of this laboratory is modest and could with advantage be increased.

2. *Microbiological Institute of the Faculty of Agriculture.*

This institute performs two duties, one educational and the other of public utility (bacteriological analyses and preparation of sera for the public services).

Director, Professor A. KIRCHENSTEIN. Ten assistants and sub-assistants, including three doctors, two assistant veterinary surgeons and four agricultural experts.

(a) *Teaching.* — The courses are optional for medical students and compulsory for students at the faculties of agriculture and veterinary medicine ; they include lectures on theory but devote still more time to practical work.

The practical work is divided into three terms :

(1) First term : general microbiological studies for students at the faculties of agriculture and veterinary medicine.

(2) Second term : studies in the bacteriology of milk for students at the faculties of agriculture and veterinary medicine.

(3) Third term : studies in medical bacteriology for students at the faculties of veterinary medicine and general medicine (optional).

(b) *Services of Public Utility.*

(1) For the health services :

(a) For the veterinary service : examinations and analyses for the diagnosis of infectious diseases of animals. From January to November 1924 : 450 analyses (rabies, anthrax, glanders).

(b) Bacteriological analyses of water for a number of municipalities.

(2) For the Society for the Campaign against Tuberculosis : tests for Koch bacilli in sputum (250 examinations since May 1924).

(3) For various other institutions (dairies) : bacteriological analyses of milk ; preparation of lactic bacilli.

(4) For the health services : preparation of vaccines and sera :

(a) Vaccinal lymph against smallpox : the Institute has just created the first vaccine-producing establishment in Latvia.

(b) In case of necessity, anti-cholera and anti-typhoid vaccines.

(c) Sera against swine-fever (two horses have been rendered immune since January 1924) ; since then 50 litres of serum have been collected. This disease is fairly prevalent among the live-stock of Latvia, which was dependent on Esthonia and Germany for this serum.

(d) Ordinary horse serum for therapeutic injections.

Programme of the Institute. — Development of the preparation of therapeutic sera for men and animals, beginning with serum against diphtheria.

It is proposed to keep the horses on a farm belonging to the Faculty of Agriculture, and to extend the premises and increase the material of the Institute, which are at present somewhat inadequate. 420,000 lats would be required to create this Institute for the Preparation of Sera.

Remarks. — The following remarks are suggested by a visit to the various bacteriological laboratories of Latvia.

These laboratories, which have just been established in spite of unfavourable local conditions, have not yet overcome the difficulties attendant upon their creation. Their efforts are not sufficiently co-ordinated ; their departments appear to be unconnected, and the part assigned to each in the health services is not sufficiently defined ; the premises, apparatus and material are inadequate.

The following programme, to be spread over several years, might be adopted to develop these laboratories, which are so necessary to the health service :

(1) Separation of the teaching branch from the branch devoted to the public health service.

(2) Grouping of the various bacteriological departments under a single management, and progressive creation of a *central health laboratory* with several branches :

(a) Clinical analysis branch ;

(b) Chemical analysis branch ;

(c) Epidemiological studies and research branch (epidemics and epizootics) ;

(d) General health enquiry and investigation branch (water, milk, meat, preserved foods, etc.) ;

(e) Branch for the management, control and supply of district laboratories.

(3) Progressive establishment of district laboratories at various points in the country (Liepaja, Daugavpils, Rezekne and Jelgava for example). These laboratories

could perform the clinical analyses and the analyses required by the health services of their districts. They might be maintained by the municipalities or by the districts.

These district laboratories might be established on a modest scale, the initial expenses (material) not to exceed 4,000 or 5,000 lats.

They should carry out the following researches with the requisite degree of accuracy in accordance with the methods recommended to them by the central laboratory ; and with the material supplied by it :

Diagnosis of typhoid infections : T.A.B. sero-diagnosis and hæmoculture ;
Diagnosis of diphtheria (cultivation of coagulated sera) ;
Diagnosis of dysentery (isolation of the dysentery bacillus) ;
Identification of syphilis : direct tests for the spirochæta on swabs ; Wassermann test ;
Diagnosis of parasites of stools ;
Diagnosis of tuberculosis and leprosy bacilli on swabs ;
Diagnosis of the hæmatozoa of malaria ;
Examination of the cephalo-rachidian fluid and cultivation of the meningococcus ;
Test for the Bacillus coli in water (colimetry).

The only difficulty is the training of staff. In Latvia there are no arrangements for training bacteriologists, and there are no bacteriological experts among the doctors of the hospitals and health services. These bacteriological experts should also be clinical experts and be familiar with the treatment of infectious diseases. They would be in charge of the district health laboratories, would be responsible for the first epidemiological investigations, would superintend the disinfection measures, and would give useful assistance to the district medical officer. They should be remunerated sufficiently to enable them to devote their whole time to their duties. In this way a health bureau might be organised by stages in each district.

3. *Supply of Therapeutic Sera.*

The therapeutic sera for infectious diseases of man are obtained from abroad, in many cases from the Ehrlich laboratories. During the war a certain quantity of sera was obtained from Japan.

D. *Teaching of Hygiene.*

To complete these notes on the protection of public health in Latvia, it may be well to give a few facts regarding the method of teaching hygiene in that country. As Professor Léon Bernard so forcibly put it : " Unless you train a body of competent experts, no advance in public health is possible ; unless you secure the collaboration of a medical profession inspired with a new comprehension of the aims and methods of preventive medicine, the work of the experts will remain imperfect ; and unless you

gain the support of the people at large, public health will appear as a mass of vexatious, not to say tyrannical, rules and formalities, and will remain a dead letter. "

(a) *Education of the People.* — This is being extended year by year by means of lessons given in the elementary schools ; through the medium of the Press, which devotes a great deal of attention to health questions ; and by annual exhibitions organised at Riga. These exhibitions tour the country and are accompanied by demonstrations.

They are followed with great interest by the people, and the number of branches represented increases every year. They consist of three sections whose purpose is to inculcate the principles of :

(1) *Protection of Maternity.* — Section organised by Dr. PUTNIN, Professor of Obstetrics. It shows the arrangement of a room for child-birth, the articles required, their sterilisation, and the duties of the midwife ;

(2) *Puericulture.* — Dr. GRATJE, Professor of Infant Clinics. Exhibits pictures and instructions on puericulture.

(3) *School Hygiene.* — Dr. FEHRMAN, Professor of Hygiene. Statistical tables of the number of elementary schools in the towns and in the country districts. Number of pupils and of teachers. Exhibition of a model desk for pupils. Anti-venereal instruction and instruction regarding various food-poisonings.

(b) *Secondary Education.* — Lectures on food hygiene must be given in all the classes.

(c) *Teaching at the Faculty of Medicine and at the University.* Dean, Dr. ROUBERTS, Professor of Ophthalmology.

Number of students in the first half of 1924 : 858, of whom 438 were men and 420 women.

Number of teachers : professors 9, lecturers 8 ; readers and other teaching staff, 30.

Hygiene is taught by Dr. Fehrman, Professor of Hygiene, who has been good enough to send us the following curriculum.

Teaching of Hygiene to Medical Students.

1. Curriculum.

(a) General Hygiene.

1, Atmosphere ; 2, climatology ; 3, soil ; 4, nutrition ; 6, food.

(b) Personal Hygiene.

7, Physical culture ; 8, cleanliness ; 9, clothing ; 10, dwellings ; 11, heating ; 12, ventilation ; 13, lighting.

(c) Collective Hygiene.

14, Town hygiene ; 15, drinking-water ; 16, waste products ; 17, cemeteries ; 18, infant hygiene ; 19, hygiene of later childhood ; 20, school hygiene ; 21, industrial hygiene ; 22, prophylaxis of infectious diseases ; 23, health legislation ; 24, health statistics.

(d) Social and Racial Hygiene.

25, Demography ; 26, dwellings ; 27, vocations ; 28, social aspects of diseases ; 29, the great social scourges (tuberculosis, syphilis, cancer, alcoholism) ; 30, protection of maternity and childhood, puericulture ; 31, racial hygiene.

The course of general, personal and collective hygiene lasts for two terms (for fourth-year students) and the course of social and racial hygiene one term (for sixth-year medical students).

Conception. — The teaching of hygiene consists in a course of lessons on theory (four hours per week in the fourth year and two hours per week in the sixth year) and in practical work (methods of sanitary analysis).

2. The Chair of Hygiene belongs to the Faculty of Medicine and all the teaching of hygiene in the other faculties is organised by it *(e.g.*, for students in pharmacy and dentistry). There is no other Chair of Hygiene.

Teaching in bacteriology and parasitology is provided for by the Chair of Microbiology and Infectious Diseases (Professor Klimenko).

There is no special instruction in tropical hygiene.

3. The next Professor of Hygiene will be elected from among the assistant lecturers after a long period of probation and after studies abroad.

4. Besides the Professor of Hygiene, there are two assistant lecturers. The equipment is inadequate and requires to be supplemented.

5. At the end of the fourth year, students have to pass an oral examination after a practical test. At the end of the sixth year they pass an examination for the doctor's degree.

University. — The University of Latvia was founded on September 28th, 1919, and installed in the buildings of the Riga Polytechnicum. Notwithstanding the general uncertainty and the disturbed conditions which prevailed during the first months of its existence, it developed rapidly, extending its activities each day, creating new chairs and new faculties.

Its first rector was Professor E. Felsbergs. The present rector is Professor Rouberts, Dean of the Faculty of Medicine. The university comprises eleven faculties, *viz.* :

Architecture,
Civil Engineering,
Medicine,
Veterinary Medicine,

Mechanics,	Mathematics and Natural Science.
Chemistry,	Law and Economic Science,
Agriculture,	Philology and Philosophy, Theology.

It possesses a legal constitution which defines it as " the premier scholastic and educational establishment of the State and a national institution ". It enjoys complete autonomy and full liberty in its administration, researches and teaching. The professors are recruited from :

(1) Latvian professors who taught in Russia ;

(2) Latvian secondary-school teachers ;

(3) Abroad (Germany, Switzerland, France, Austria) ;

(4) Latvian elementary-school teachers.

Some of the professors who are Latvian citizens belong to the Russian or German minorities. They are allowed to deliver their lectures in Russian or German for two years ; after that, all the lectures must be in Latvian.

There are three official languages for education : Latvian, which predominates and will predominate still more in future, Russian and German. Students must know these three languages to enter the university.

The educational text-books have not yet been produced in the Latvian language, and the students usually employ the German text-books.

The university publishes a Year-book with the names of the professors, the programme of lectures and a list of the text-books recommended.

The majority of the students come from the peasant classes. The proportion of students in relation to the total population is higher than in any other country. Women students are numerous ; out of 6,000 students in 1923, 1,888 were women and 4,112 were men. The countryside and agriculture tend to be neglected in favour of the liberal professions, which will find great difficulty in absorbing so large a number of students.

	Total.	Men.	Women.
1922 : Second Term	5,137	3,460 (67.3%)	1,677 (32.6%)
1923	6,000	4,112	1,888
1924 : First Term	5,592	3,815	1,777

Out of 5,592 students on the books in the spring of 1924, 5,522 were Latvian citizens (98.75 per cent) — 4,715 of whom were of Lettish race (84.32 per cent) — and 70 of foreign nationalities (1.25 per cent).

The Faculty of Law and Economic Science has the greatest number of students, 1,297 (21.7 per cent) ; then come the Faculty of Medicine, with 852 students (14.3 per cent) ; Philology and Philosophy, with 684 students (11.9 per cent) ; Agriculture, with 694 students (11.9 per cent) ; Chemistry, 531 ; Civil Engineering, 484 ; Mechanics, 481 ; Mathematics and Natural Science, 475 ; Architecture, 147 ; Veterinary Medicine, 141 ; Theology, 94.

The teaching staff includes 61 professors, 100 assistant professors, 7 lecturers, 10 professors " *agrégés* ", 80 assistants and 15 readers ; total 281.

Budget. — From July 1st, 1922, to July 1st, 1923 : expenditure 1,472,082 lats ; receipts 413,954 lats ; Government grants 1,438,842 lats.

The teaching of each student costs on an average 273.78 lats.

The library has received gifts from different countries ; possesses 14,500 books ; receives 384 reviews from abroad by subscription or gift, or in exchange for the university publication, *Acta Universitatis Latviensis.*

IV. Protection against Causes of Infection within the Country.

Under this heading it is proposed to deal with works carried out and police regulations enforced with a view to the protection of public health. They are of vital importance for the prophylaxis of infectious diseases.

The Russian Administration had not displayed any great activity in devising " town-planning " schemes for the provincial towns. A certain effort to introduce up-to-date methods was made, however, in certain Baltic towns, such as Riga and Libau. But the war and the necessity of reconstructing the devastated areas interrupted these activities.

A programme of improvement works — supply of drinking water, laying of conduits, road-making and sewerage — should be drawn up for each town. But it will require a protracted financial effort to carry these schemes into effect. The State is prepared to make grants to poor communes undertaking public works of this kind.

A. *Water Supply.*

The position varies in the different towns and communes. Riga is the most favoured town in Latvia in this respect.

The water is abundant and pure. It is brought from a distance of 15 kilometres from an un inhabited region of dunes and sand ; it comes from natural springs which are led off at a depth of 10 metres below the surface of the dunes. This water is conducted to the central part of the town and distributed there. The outlying quarters and those west of the Dvina, except one street in the southern part, have no water-mains and depend on local wells.

At Riga, endemic typhoid fever is thought to be much more frequent in those parts of the town in which water is not laid on. Statistics of cases of typhoid fever in each house and each quarter are kept in order to determine whether their incidence is in relation with the distribution of drinking-water.

A certain number of cases of typhoid fever are attributed to contaminated milk. The milk industry is established in the area supplied by the suspected wells.

An extension of the water-supply system is being planned. The output of the springs would be sufficient for the requirements of the whole town.

Bacteriological analyses are carried out twice a month in the laboratory of Professor Adelheim, who has communicated to us the following results :

Density of germs : low.
Number of B. coli : usually absent.

Colimetry is carried out by the following process : precipitation in 3 litres of water ; precipitate cultivated on a Drigalski-Conradi medium in a Petri box.

The water of the wells of the outlying parts of the town of Riga contain on an average 5,000 B. coli per litre.

The water of the neighbouring spas of Bulli, Bulduri, Edinburga, Majori, Dubulti and Melluzi is of poor quality. It is pure at Kemeri.

The ports (Liepaja and Ventspils) have artesian wells.

Valmiera and Cesis have a central supply system and a system of water-mains for a small part of the town ; the same applies to Jelgava and Daugavpils. The country districts get their water from wells. The wells and fountains of various kinds are badly protected and often defective.

A serious effort will have to be made to improve these conditions ; the municipalities are giving their best attention to this important question of water supply.

B. *Sewage, Sanitation and Drainage.*

The system of evacuating foul water requires development in all the towns.

Riga possesses a drainage system for the central part of the town (new and old town). It leads into the Daugava ; the foul water is carried off by a volume of water several hundred times larger. The outlying and suburban quarters have no drains.

The position is the same at Jelgava and Daugavpils. The small towns have no drains and use more or less water-tight pits, which are periodically emptied, and the primitive system of bins.

C. *Houses and Dwellings.*

In several towns — for example, in the old town of Riga and at Daugavpils — there are numerous old houses which are overcrowded and scarcely fit for habitation.

The law, however, does not yet provide for the inspection and supervision of private dwellings. Regulations have only been framed for the construction of factories, workshops, industrial and commercial premises, cinemas and theatres.

Dwellings in the town are few and overcrowded ; nothing has yet been done to build workmen's houses in the outlying quarters with the assistance of the commune or the State. Building activity has been confined to the devastated areas and to the erection of new buildings in the country. The latter are built by the new owners with the assistance of grants from the State under the Agrarian Reform Law.

The country dwellings are wooden bungalows raised above ground level, with three rooms and a kitchen ; they are roofed with thatch or shingles (thin boards in the shape of tiles).

D. *Control of Foodstuffs.*

Foodstuffs may be adulterated, counterfeited or spoilt and be injurious to public health. They may provoke acute or chronic poisoning or propagate infections (for example, meat and preserves: paratyphoid and ptomaine infections ; milk: typhoid infections). The supervision of the sale of these products is a public duty.

In March 1920, the Department of Public Health issued general regulations on the sale of foodstuffs.

Meat. — The inspection of meat is organised by law and carried out by the municipalities. The application and observance of the regulations is superintended by veterinary officers of the State belonging to the health inspection service and attached to the Department of Public Health.

Inspection is compulsory before and after slaughter. The method of inspection, the points to which attention must be paid, and the cases in which the meat must be provisionally or definitely condemned are specified.

In 1923, Latvia exported 927,991 kilos of meat, representing a value of 1,377,898 lats. Meat intended for export is subject to stringent measures of control and inspection.

Milk and other Foods. — The trade in milk and the sanitary conditions of dairies are governed by general regulations. The Municipality of Riga has extended the application of these general regulations by a series of special measures.

Butter, particularly that intended for export, is frequently analysed and inspected ; 2,302,479 kilos of butter were exported in 1923, representing a value of 9,271,064 lats.

The *Agricultural Technology and Foodstuffs Supervision Laboratory* of the Faculty of Agriculture, under Professor Dellé, performs part of these analyses and investigates fraudulent wines, beer, sugar, preserves, jam and butter. The sale of adulterated wine

under false labels is common. A draft law on the adulteration of wines has been drawn up by this laboratory.

The district and municipal medical officers have to assist the authorities responsible for supervising the sale of foodstuffs and for inspecting the markets. They must endeavour to discover the processes used in adulterating the nutritive value of foods, and investigate illnesses caused by food. Cases of food-poisoning are not rare. These doctors are also responsible for obtaining specimens for analysis in the prescribed conditions.

These analyses are carried out by two laboratories at Riga :

(1) That of the Faculty of Agriculture mentioned above (1,150 analyses of foodstuffs in 1923) ;

(2) That of the town of Riga, under M. P. Bernard (5,069 analyses in 1923).

The sale of fraudulent foodstuffs is punished under Article 138 of the Penal Code.

The sale of and trade in toxic and narcotic drugs is subject to regulation. Latvia has adhered to the International Convention on the trade in opium and cocaine.

V. Study of Infectious Diseases.

A. *General Health Situation.*

In 1919, at the end of the war and of the struggles which were the prelude to independence, the general health situation was critical. Food and clothes were scarce ; part of the population, being still without dwellings, had not settled down. The repeated passages of troops and the return of refugees from Russia were followed by the spread of the contagious diseases which make their appearance in times of great distress. Typhus, relapsing fever, typhoid fever and dysentery broke out on a large scale and continued in the epidemic state until the end of 1922.

Since 1923, the general health situation, despite the often unfavourable hygienic conditions, has tended to become normal. Typhus is exceptional, only occurring among refugees from Russia and in the eastern frontier districts. Typhoid infections, however (typhoid fever, paratyphoid), persist in the endemic state and cause considerable morbidity.

The general conditions of life in town and country have improved ; food is sufficiently abundant.

The population, which diminished by about one-third between 1914 and 1920 — the decrease being 955,869 — increased by 528,669 between 1920 and 1924. The number of deaths per 10,000 inhabitants, which was 19.62 in 1920 and 14.61 in 1922, was 13.66 in 1923. Similarly, the number of births per 10,000 inhabitants improved. It increased from 17.04 in 1920 to 21.89 in 1923.

The two following tables show the movement of the population in greater detail.

Movement of the Population.

1. In the whole of Latvia :

		Population	Live births	Deaths exclusive of still-births	Excess of births over deaths
	1800	725,012	—	—	—
	1914	2,552,000	—	—	—
June 14th	1920	1,596,131	29,434	33,891	— 4,457
Jan. 1st	1921	1,727,500	36,420	25,331	+ 11,089
,,	1922	1,850,622	41,146	27,553	+ 13,593
,,	1923	1,885,870	41,796	26,680	+ 15,716
,,	1924	1,909,700	—	—	—

2. In the different provinces in 1923 :

	Number of inhabitants on Jan. 1st, 1924	Live births	Deaths exclusive of still-births	Excess of births over deaths
Riga	285,000	5,007	3,868	+ 1,139
Vidzeme (Livonia). . .	426,700	6,562	5,597	+ 965
Kurdzeme (Courland) .	343,200	5,754	4,160	+ 1,594
Zemgale	274,400	5,432	3,810	+ 1,622
Latgale	580,400	19,041	8,645	+ 10,396
Latvia (Total)	1,909,700	46,796	26,080	+ 15,716

Average of Births and Deaths per 1,000 *Inhabitants.*

1. In the whole of Latvia :

	Births per 1,000 inhabitants	Deaths per 1,000 inhabitants
1920	17.04	19.62
1921	19.68	13.69
1922	21.82	14.61
1923	21.89	13.66

2. In the different provinces in 1923 :

	Births per 1,000 inhabitants	Deaths per 1,000 inhabitants
Riga	17.76	13.72
Vidzeme (Livonia).	15.38	13.12
Kurdzeme (Courland)	16.77	12.12
Zemgale	19.80	13.88
Latgale	32.60	14.89
Latvia (Total)	21.89	13.66

A third table, " Movement of Contagious Diseases, " shows the general decrease in these illnesses.

Movement of Contagious Diseases.

	Town of Riga:		District of Riga:		Whole of Latvia:	
	1922	1923	1922	1923	1922	1923
Smallpox	11	3	1	2	1,602	22
Typhus fever	366	71	21	3	1,476	430
Typhoid fever	259	310	41	37	973	1,005
Relapsing fever	59	5	1	—	115	10
Paratyphoid	7	11	—	—	27	38
Dysentery	125	28	48	1	913	114
Malaria	20	7	7	4	66	50
Measles	96	65	27	—	711	315
Scarlet fever	652	691	72	90	1,579	1,555
Diphtheria	137	122	20	122	698	645
Whooping-cough	58	31	47	9	509	479
Mumps	59	238	5	114	316	817
Epidemic cerebro-spinal meningitis	1	2	—	—	22	19
Puerperal fever	—	—	—	—	23	22
Leprosy	7	5	2	2	24	37
Hydrophobia	1	2	6	2	15	21

B. *Tuberculosis.*

Tuberculosis is not included among the illnesses the notification of which is compulsory. At present it is only notified as a cause of death. The only information available regarding the frequency of this disease in Latvia, therefore, consists of the mortality figures, which give only an approximate idea of the real incidence of the disease.

In 1923, out of 19,723 deaths occurring in Latvia, exclusive of the province of Latgale, 3,120 were due to pulmonary affections. Of these 3,120 deaths, 1,744 were due to tuberculosis of the lungs, 1,012 of the cases being men and 732 women.

The table of deaths classified by age and profession shows that tuberculosis is met with in every class of society.

In Latvia, tuberculosis is a common disease. There was a recrudescence during the last years of the war of all the forms of the illness, including tuberculosis of the bones. It is particularly formidable because it exists in a latent state in districts which are often densely populated and subject to a somewhat rigorous climate.

It has not yet been possible to organise in an adequate manner the treatment of consumptives or the steps to be taken to control them. In the poorer classes, serious cases of tuberculosis live in small rooms in contact with healthy children. They are only taken to hospital in the last stages of the disease. All the hospitals

do not possess special wards to isolate serious cases of consumption, which remain in the general wards.

The campaign against tuberculosis is in its early stages ; the anti-tuberculous equipment of the country is as yet little developed.

I. *Anti-Tuberculosis Union of Latvia.*

A society for the campaign against tuberculosis was founded at Riga in January 1924 under the name of " Anti-Tuberculosis Union of Latvia " ; its president is Madame Elsa KLAUSTIN and among its members are the leading public figures of the country.

The programme of its activities is based on Dr. Calmette's system of dispensaries, and on the principle that it is easier to protect 1,000 children and cure some hundreds of slight cases than to treat a single case having reached an advanced stage. The general plan is to protect children, to separate healthy children from sick parents by sending them to families in the country or to infants' homes or children's hostels ; and to create holiday camps and open-air schools for the older children, and sanatoria for slight cases.

Its primary means of action is the dispensary.

The *first dispensary* was opened on May 1st, 1924, at Riga (rue des Chevaliers, 5, in the consultation department of No. 1 Town Hospital) : 4 doctors, 3 children's nurses, visiting nurses ; consultations three times a week from 4 to 8 p.m. after the working hours of the workmen.

From May 1st to November 30th, 2,728 persons were visited, of whom 1,806 were adults and 922 children.

This dispensary proposes to discover and register all tuberculosis patients ; to give them the necessary attendance and advice according to the stage of the disease ; to visit consumptives in their homes ; to provide for their isolation ; to improve the sanitary conditions of their dwellings and their nourishment ; to arrange for the disinfection of dwellings ; to inform the patients and their friends of the ways in which tuberculosis is transmitted and of the danger of co-habitation with consumptives ; to provide for the protection of children and infants living in the vicinity of consumptives ; to give assistance to children attacked by the disease, and to ensure the treatment of patients as soon as the first symptoms make their appearance.

The accomplishment of this programme is hindered by the absence of the requisite resources and institutions.

1. At present it is difficult to send children living with tuberculous parents away to the country ; the peasants are not yet accustomed to take in children in this way, and many houses destroyed during the war are still in process of reconstruction.

2. Children living with tuberculous parents and showing the first symptoms of infection (adenitis) are treated and isolated at the Ogré Sanatorium, but the latter only has accommodation for a very small number.

Ogré Sanatorium, founded on June 28th for 40 children. One doctor. 83 patients treated between June and November ; 45 discharged in good health.

The cost of maintenance of a child *per diem* is 3 lats.

The dispensary and the Ogré Sanatorium are the only two institutions which the society at present possesses.

The programme of the society is to obtain, as soon as its finances permit :

(1) Three dispensaries of the same type as the first ;

(2) Three or four summer camps and open-air schools to remedy the difficulty of sending children to families in the country ;

(3) A sanatorium for slight cases in which work would be provided for the patients. The Government has given a piece of ground for this purpose, but no arrangements have yet been made for its utilisation ;

(4) *A sanatorium at Bikernick* for the isolation of serious adult cases and the treatment of bed-ridden adult consumptives.

This sanatorium is already the property of the Anti-Tuberculosis Union. Since June 1924, it has been used as a convalescent home for disabled combatants and has been administered by the Red Cross.

Founded for the campaign against tuberculosis in 1907 and situated in a pine-wood near Riga, it possesses a gallery separated from the main building for helio-therapic cures and could shelter one hundred patients and isolate forty serious cases. It is at present unprovided with beds or furniture.

The Anti-Tuberculosis Union of Latvia has not at present the necessary funds to open the Bikernick Sanatorium. This sanatorium would be of the greatest service in the general campaign against tuberculosis. It is the institution on which the first efforts should be concentrated, in view of the difficulty of isolating serious cases of tuberculosis in Latvia.

Funds of the Union. — These are exclusively derived from public charity, subscriptions, gifts, lotteries, collections and Government and municipal grants.

	Lats.
Funds available on December 1st, 1924	57,266
Expenditure	43,626
Credit Balance	13,640

II. *Activities of the Latvian Red Cross in the Campaign against Tuberculosis.*

The Red Cross also does valuable work in the campaign against tuberculosis through the various consultation services, with manifold duties which it has created and which it is developing in the different towns, and through the creation of sanatoria.

(1) Creation of a sanatorium for tuberculosis at Bate, near Liepaja, in June 1922 ;

(2) Creation of a second sanatorium for adult cases near Jelgava ;

(3) Creation of a sanatorium for tuberculosis of the bones at Krimulda.

Krimulda Sanatorium for Tuberculosis of the Bones. — It is situated 50 kilometres north of Riga, in a region of wooded hills on a natural terrace overlooking the river Ula (Northern Aa), which winds through a deep gorge below the sanatorium, in the vicinity of the forest are reservations known as the " National Park ".

The Red Cross has leased from the State for 200 lats per annum a park of 15 hectares round the hospital, and a farm, which it administers separately, of 100 hectares of woods and fields, and 70 hectares of meadowland. The produce is for the use of the Red Cross.

Founded on July 22nd, 1922, the sanatorium is established in an old castle with a central building and two wings. The numerous rooms are converted into dormitories, with from four to eight iron beds, as the need arises.

It contains two dressing wards, one physio-therapy room with quartz lamp, and an electric power-house with 30 h.p. Mazout motor ; it is heated by Russian stoves, has a number of bathrooms and 65 beds.

Director : Dr. Bergman. Three nurses with Red Cross diplomas.

The patients come from all parts of Latvia ; they are selected at the consultations of the Red Cross Hospital at Riga as the patients most likely to benefit by treatment. The treatment takes many months, and sometimes as long as two years. Attendance is costly, but the greater number of the patients are received free of charge. The few patients who pay are treated free of charge after a few months. The Red Cross provides 76 per cent of the expenses. The charge *per diem* for paying patients is two lats.

Budget. — 90,000 lats. Receipts, 30,000 lats.

Number of Patients. — Between the date of the opening of the hospital in July 1922 and November 19th, 1924, 154 patients left the hospital apparently cured.

50 per cent suffered from spinal caries (Pott's disease) ;
20 ,, ,, ,, coxo-femoral arthritis ;
30 ,, ,, ,, arthritis of another joint.
About 20 per cent had multiple lesions of bones.

Trealment. — Rest and lying in bed ; the patients remain in bed until they are completely cured. Abundant food. No surgical treatment except as regards the lancing of abscesses and the injection of therapeutic fluids. The therapeutic results are good, particularly as patients not treated before their arrival continue to move their limbs. The pains soon cease when the patient remains lying in bed. The patients only get up when they are clinically cured. When they have been trained to recover the use of their limbs they are discharged and supplied with orthopædic appliances (corsets, etc.) made in the workshops of the Red Cross.

Sun cures in summer ; in winter exposure to the light of a quartz lamp.

Cases of spinal tuberculosis with protuberances are numerous. The patients have to lie on their backs on a hard bed ; a sand bolster is placed under the protuberance, which in most cases is gradually reduced. No plaster corsets are used.

Prof. JANKOWSKI is in charge of the treatment. The results obtained in this sanatorium have been remarkable.

C. *Venereal Diseases.*

The disturbances of recent years, the occupation by foreign armies, the migrations and instability of the population, the return of the refugees, the general poverty and lowering of moral standards, were followed by a large increase in venereal diseases. Before 1914, they were rare in Latvia, and were entirely unknown in the rural districts. To-day, they are met with everywhere, particularly in the towns.

The Department of Public Health promulgated in 1922 a provisional series of regulations on preventive measures and on the campaign against venereal diseases.

Syphilis is subject to compulsory notification. Doctors who observe a new case are required to send a notification form to the district medical officer without giving the name of the patient. The district medical officers send a return of these notifications every month to the Central Health Service ; but few doctors observe these rules, and no accurate data are available on the exact incidence of syphilis in the civil population.

The Central Health Service drew up a statement of cases of disease in the towns and districts in 1922. The following are a few of the figures :

	Total for all Latvia.	At Riga.	At Liepaja.	At Daugavpils.
Syphilis	5,488	3,588	455	356
Chancre	578	341	51	42
Gonorrhœa	5,686	3,492	836	404

It has not been found possible to create special dispensaries for workmen and for the poor. They are dealt with at the general hospital dispensaries and at those of the insurance companies. In this way they can follow a regular treatment at small cost.

Patients are usually treated by means of organic arsenical compounds.

The diagnosis and effectiveness of the treatment can be checked by the Wassermann test. This is carried out at Riga by the bacteriological laboratory of the university under Professor Adelheim ; at Liepaja and at Daugavpils by a private laboratory authorised by the Central Health Service.

Prostitution exists, particularly in the towns. Clandestine prostitution occurs on a considerable scale. The number of women living by clandestine prostitution is

estimated to be ten times that of the women entered on the police registers and regularly examined.

In November 1924, 312 women were under the supervision of the special police at Riga. Before 1914, twenty licensed houses of prostitution, some of them with as many as thirty women, existed in this town. In 1922, the number of houses had fallen to five. These were closed in June 1924, and there are now only three licensed houses in Latvia, in the provinces.

Medical Examination of Prostitutes. — This is carried out in the large towns by doctors detailed by the municipalities, and in the districts by the district medical officer.

At Riga, the 312 women on the registers are divided into three groups and taken twice a week to the Station for the Supervision and Examination of Prostitutes.

The staff consists of two doctors, one nurse, one midwife, one secretary and one servant.

There are two waiting-rooms, one room with a table for gynæcological examinations, and a laboratory in which the swabs are examined.

The following operations are carried out in respect of each woman : general clinical examination twice a week ; urethral and vaginal investigation once a week; Wassermann test every three months. Ten per cent of the Wassermann tests are positive.

In 1923, this service observed : syphilis, 203 cases ; gonorrhœa, 305 cases ; gonorrhœa and syphilis, 30 cases ; chancre, 8.

This station has carried out 7,688 tests for gonococci and obtained 597 blood specimens for Wassermann tests.

Sick prostitutes are treated at the Alexandershöhe Hospital.

Budget. — Receipts, 3,161 lats ; expenditure, 8,881 lats. The examination of a prostitute costs 0.61 lats.

Regulation of Prostitution. — This question is under consideration, and various opinions are held ; in some quarters complete liberty is advocated, and in others regulation, with the system of licensed houses under the supervision of the administration. Some of the administrative representatives are in favour of complete liberty, while allowing for a certain degree of supervision and educative measures. A large number of doctors consider that it is preferable to maintain and improve the present system of regulation.

D. *Typhus Fever.*

Cases notified :	1919	—
	1920	4,631
	1921	1,288
	1922	1,480
	1923	430
	1924 (first 10 months)	250

Typhus has been endemic in Latvia for many years, and usually appears in the form of sporadic cases. Exceptionally there are recrudescences of its activity. Thus at Riga, in 1909 and 1910, it caused 166 and 254 deaths respectively.

In the first years of the war there were only a small number of cases. From 1918 onwards, it developed in Poland and Lithuania, and became more frequent at Riga (52 cases).

In 1919, during the occupation of Riga by the Bolsheviks, it spread rapidly — 29 deaths in January, 58 in February, 96 in March, more than 403 in June.

The organisation of the campaign against typhus encountered serious difficulties. Notification was compulsory, but was only carried out in about a quarter of the cases. The patients were left to their own devices at home. The scarcity of means of communication and the overcrowding of the hospitals prevented their being taken there.

The dissemination of the disease and of lice was promoted by the forced exodus of the middle classes to the workmen's houses in the suburbs and by the occupation of the dwellings of the well-to-do by the working classes. Measures of disinfection became insufficient. The bathing establishments closed down for want of firewood; soap was rare and at exorbitant prices. All the linen and clothes had been requisitioned. The people could not change their garments or their linen. The clothes of persons dying of typhus were sold without being disinfected. The prisons were full to overflowing. In the overcrowded hospitals the patients were put to bed in their clothes with blankets infested with lice. Patients suffering from typhus, influenza and pneumonia were placed side by side without discrimination or isolation.

In 1919, out of 12,800 cases of typhus registered at Riga, there were 1,541 deaths, *i.e.*, a mortality of 12 per cent.

12,492 persons perished at Riga during this year, making an average of 621 deaths per ten thousand inhabitants :

1,541 from typhus ;
458 from smallpox ;
1,058 from influenza ;
763 from dysentery ;
2,264 from starvation, old age or general debility ;
1,499 were executed.

In the case of children, typhus was comparatively mild. The contagion was very widespread, but the virulence of the disease remained small. The mortality did not exceed 12 per cent.

The typhus epidemic presents no special phenomena from the clinical point of view ; the hæmorrhagic and gangrenous forms were rare. In some cases the disease took a galloping form similar to cholera, with exclusive localisation of the exanthema in the mucus of the intestine.

The mortality was greatest among persons between 45 and 64 years of age.

Despite the prevalence of lice and the appearance of a few cases of relapsing fever, there was no epidemic of relapsing fever at the climax of the typhus epidemic. This disease only developed some months later.

We are indebted for the above details to Professor ADELHEIM.

Typhus persisted throughout Latvia in 1920, and lost ground but slowly in 1921 and 1922, as it was kept up by the movement of refugees and emigrants from Russia. This movement has now to a great extent ceased, and typhus is tending to return to its pre-war figures.

E. *Relapsing Fever.*

Cases notified :	1919	—
	1920	547
	1921	275
	1922	116
	1923	10
	1924 (first 10 months)	2

The maximum incidence of relapsing fever was in 1920 ; since then, its decline has been constant in Latvia, as in the whole of Eastern Europe, and has been more rapid than that of typhus.

F. *Smallpox.*

Cases notified :	1919	—
	1920	422
	1921	455
	1922	160
	1923	23
	1924 (first 10 months)	18

The frequency of smallpox has diminished since 1923. The decline is progressive, and the illness is tending to disappear altogether. Vaccination is actively carried out, and is organised by the Central Health Service. It is performed by the municipal medical officers. A bill on vaccination against smallpox even more stringent than the Russian law has been introduced into Parliament. The anti-smallpox vaccine was until recently obtained from abroad, but an institute for the production of vaccine has just been created at Riga.

G. *Typhoid Infections.*

Typhoid infections (typhoid fever with Eberth bacilli and paratyphoid with paratyphoid bacilli) are endemic in Latvia.

There was a large increase in these diseases in 1920 and 1921. Since 1922, their frequency has diminished, and they have remained at a fixed figure in the endemic state. In 1924, there was a marked recrudescence in Latvia, as in Lithuania, Esthonia and Finland.

The number of cases notified in Latvia was :

1919	1920	1921	1922	1923	1924 (first 10 months)
—	1,615	1,431	1,011	1,043	1,356

Cases are more frequent in the towns than in the country, and in summer, from June to November, than in winter (243 in August 1924 ; 77 in January).

The actual number of cases is probably greater than the number of cases notified. Infections of short duration and not of a grave character are bound to occur among this partly-inoculated population without their nature being clearly defined.

Diagnosis is made in exceptional cases by hæmoculture, and more frequently by sero-diagnosis.

Typhoid infections are the only contagious diseases with a higher number of cases notified in 1923 and 1924 than in 1922. With tuberculosis and scarlet fever, they are the diseases most prevalent in Latvia.

No campaign is organised against these infections. Anti-typhoid vaccination was obligatory in the army during the war, but it is now optional. It is only carried out in exceptional cases in infected districts and on nursing staff attending typhoid patients. No researches have been carried out respecting germ-carriers.

The persistence of the endemic must be primarily attributed to the inadequacy of drainage and of the drinking-water supplies in all the towns.

Bacillary Dysentery.

Cases notified :	1919	—
	1920	5,497
	1921	1,162
	1922	913
	1923	114
	1924 (first 10 months)	270

Amœbic dysentery is not observed in Latvia.

Bacillary dysentery developed in 1919 and 1920 throughout Latvia, causing a veritable epidemic. Since 1921, it has been continually on the wane. In 80 per cent of the cases the isolated bacilli corresponded to the bacillus of Shiga ; the bacillus of Flexner and the Y bacillus were only observed in less than 10 per cent of the cases.

H. *Cholera and Plague.*

These diseases have not occurred in Latvia since before 1914, with the exception of a single case of cholera in 1921, observed in a refugee from Russia, who was placed in hospital at the Rezekne quarantine station.

I. *Malaria.*

Before the war, malaria was infinitely less prevalent in the Baltic provinces and in Latvia than in the other parts of Russia.

The figures per 10,000 inhabitants were as follows :

Courland	3
Livonia	3
Esthonia	0.3
Government of Samara	514.7
Southern Governments, as many as	1,461.4

Since the war, malaria has increased in frequency and gravity throughout Russia, and has developed in regions hitherto unaffected. The Baltic countries, however, have escaped.

There is, nevertheless, in Latvia a native form of malaria with definite characteristics. It accounts for about half the cases observed since 1920, the other half coming from Russia.

We are indebted to Professor Adelheim for the following statistics, based on laboratory examinations. They show the incidence of malaria in the different months of the year, but only refer to a small proportion of the actual cases.

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Total	
1920. .													58	cases.
1921. .			2	12	24	31	38	46	26	9	2	2	192	»
1922. .		1	5	—	20	7	13	4	5	1	—	1	57	»
1923. .	1	1	2	3	8	7	6	2	2	5	—	—	37	»
1924. .	1	2	9	15	52	45	57	52	33	10	7	3	286	»
Total .	2	4	18	30	104	90	114	104	66	25	9	6		

The hæmatozoa observed in cases of native origin have always been *plasmodium vivax*.

Anophelism exists in the rural districts round the Latvian towns. In the centre of Riga, the canals of the public gardens on the old fortifications, which follow the line of the old moat, serve as places for the deposit of eggs. On the outskirts of the town anopheles larvæ can often be found in the ponds and swamps, and full-grown insects in the neighbouring houses.

Notwithstanding certain conditions favourable to its development (local anophelism, existence of malaria in the district from the earliest times, recrudescence of malaria in Russia), malaria is still rare in Latvia.

K. *Leprosy.*

Historical Retrospect. — The first mention made of leprosy in the chronicles of Latvia dates back to 1220. Leprosy was not very widespread at this period among the indigenous population. It made progress during the following centuries ; in the sixteenth century, lepers' asylums are spoken of at Cesis, Limbashi, Valmeria, Jelgava and Kuldiga.

The disease seems thereafter to have diminished in frequency ; the lepers' asylums ceased to exist in the eighteenth century, during which the epidemic appears to have

died out. Isolated cases persisted, however, and in the second half of the nineteenth century this disease developed with some rapidity.

According to the official figures of the Russian Government, in 1900 there were :

In Northern Latvia	431 lepers
In Southern Latvia	546 lepers,
a total of .	977 lepers registered in

Latvia during a period of thirty years.

In 1908, there were 367 lepers, making one per 7,000 inhabitants. 280 were interned in lepers' asylums.

Many lepers died during the war as a result of the epidemics, the scarcity of food and the general difficulties of living.

In 1923, there were 266 lepers, or 1 per 8,850 inhabitants.

There are at present 214 lepers in Latvia, isolated in three asylums at Riga, Talsi and Cesis. All the known cases of leprosy are placed in asylums.

In 1922, 39 lepers left the asylums completely cured.

Forms of Leprosy in 611 cases :

		Per cent
Tuberculous leprosy	441 cases	= 72
Nervous leprosy.	170 ,,	= 27.8

Average Age of Patients when Leprosy makes its Appearance :

Men :

Tuberculous leprosy : 209 cases	37 years 8 months.
Nervous leprosy : 66 cases	40 years.

Women :

Tuberculous leprosy : 233 cases	42 years 7 months.
Nervous leprosy : 164 cases	46 years 3 months.

Average Duration of the Disease in 368 *cases* :

Men :

Tuberculous leprosy : 130 cases	10 years 5 months.
Nervous leprosy : 42 cases	15 years.

Women :

Tuberculous leprosy : 147 cases	11 years 2 months.
Nervous leprosy : 50 cases	13 years 7 months.

Regulation of the Campaign against Leprosy.

1. Compulsory registration.

2. Periodical search for suspected cases and lepers by the municipal and district medical officers among the neighbours and relations of lepers.

3. Compulsory internment of lepers in the asylums, with fairly strict isolation from the outside world. Isolation at home is not allowed.

4. Treatment of the lepers by the doctors of the asylums.

5. Education of the public regarding the infectious character of the disease, through the newspapers and by means of pamphlets.

The author is indebted for the above details to Dr. SCHIRONS, Director of the Riga Lepers' Asylum, Professor at the University of Latvia.

Riga Lepers' Asylum. — Founded in 1893 by Mme. KOKOREVA, whose son was a leper.

120 beds ; 110 patients isolated until they are cured ; 16 cases regarded as cured were discharged in 1923, but remained under medical supervision.

Administered for the last three years by the Department of Public Health. Budget : 75,000 lats.

Staff : Professor SCHIRONS ; one chemist, one nurse, one medical attendant, four healthy servants, four leper servants.

The lepers may not leave the grounds surrounding the asylum. There are five children, and one leper has undertaken the education of a leprous child twelve years of age.

Description : Three villas connected by corridors ; dormitories of five to eight beds ; room of two beds ; large entertainment-hall with stage ; recreation-hall ; dining-hall ; two chapels, Lutheran and Greek Orthodox ; an orchestra formed by the lepers ; disinfection service ; a cell for punishment.

Laboratory of clinical diagnosis and pathological anatomy.

The buildings are comfortable and clean ; their exterior aspect is attractive. The lepers enjoy a considerable degree of comfort.

L. *Hydrophobia.*

Cases notified :	1919	—
	1920	—
	1921	—
	1922	15
	1923	21

Before the war, hydrophobia was frequent in Russia and in the Baltic countries.

In 1910, there were 22 " Anti-Rabies " Institutes, and 27,133 persons vaccinated against hydrophobia.

In 1914, there were 32 institutes, 35,462 persons vaccinated and 695 deaths, 70 of which were among vaccinated persons.

In the Government of Livonia the number of bites from mad beasts remained fairly constant : 49 in 1911, 52 in 1912, 91 in 1913.

The district of Ösel (in Esthonia) remained free from hydrophobia, thanks to strict measures of quarantine which were easy to take on an island.

The Anti-Rabies Institute at Riga was founded in May 1914. Its radius of action has changed several times as a result of political events. In 1918, at the time of the German occupation of Esthonia, it covered the whole of Esthonia and Latvia. In June 1919, the Republic of Esthonia created a similar institute at Tartu ; since then the Riga Institute's activities have been confined to Latvia.

2,792 persons were vaccinated at this Institute between May 1914 and May 15th, 1923.

In 1915, the population of Riga was diminished by half its numbers after the evacuation of the factories. The number of persons bitten increased, however, in 1916 and 1917. In 1918 and 1919, food was scarce, and it became impossible to feed the dogs; they were nearly all killed and were often used as food. The number of persons bitten correspondingly decreased.

Until 1922, the number of cases of rabies in animals remained at a low figure ; but from December 1923 onwards a veritable epizootic broke out and assumed unexpected proportions. From Riga, where it originated in the suburb to the west of the Daugava, the epizootic spread to the countryside, to the small towns, and to the whole of Livonia, creating an active centre of infection in the district of Cesis. Courland and Latgale were less affected, and Liepaja escaped.

The principal carriers of the disease were dogs. Although there was a considerable number of cats at Riga, cases of cat-bites were rare. Rats are also numerous, but they did not contribute to the spread of the disease. Foxes became infected in 1919 and 1920, but the contagion did not spread to dogs. An elk also contracted the disease. This giant of the woods went mad and terrorised a wide area. It rushed through the villages, pursuing men and animals, crashing into walls and trees in its wild career. Eventually it was destroyed. Its brain was found to contain Negri corpuscles.

Sources of Bites from 1914 *to* 1923 :

Dogs	2,396	(322)	Men	4
Cats	128	(8)	Foxes	3
Horned animals	110	(4)	Wolves	2
Horses	66	(10)	Badger	1
Goats	6		Wounds during autopsy of an animal	1
Pigs	5			

Figures in parentheses refer to the year 1923.

Out of 2,729 persons vaccinated, there were three deaths, or 0.12 per cent.

Vaccination is carried out by a very active method with marrow desiccated during one day only, and a fixed virus which has had 1,556 animal passages. No complications have been observed to result from the use of this active method.

Prophylactic measures have been taken regarding the movement of dogs.

These details have been communicated by Professor Adelheim.

SUMMARY.

The work of reconstruction in Latvia has made good progress and has been conducted according to universally recognised principles.

The care and attendance requisite for disabilities necessitating surgical aid are everywhere well organised. Valuable experience was gained during the war, and even in the small towns there are well-organised and well-equipped surgical services.

The programme of the general development of health organisations should include not only the work of public relief and assistance but also measures for the prevention of infectious diseases. Every effort must be made to improve the local conditions which permitted past epidemics to develop, and which allow several contagious diseases to persist.

The measures which should be taken, in addition to those already existing, and which should be brought into action at this stage of the progressive organisation of public health in Latvia, have already been mentioned in the preceding pages.

They may be summarised as follows :

Continue the adjustment of the old legislation to new conditions, and the progressive codification of the health regulations. Institute a Central Health Board.

Persevere in the campaign against endemic diseases, such as typhoid infections, by encouraging the municipalities to improve the supply of drinking-water and the drainage system, and by extending anti-typhoid vaccination in the infected centres.

Develop the facilities for isolation and ensure the comfort of contagious patients in the hospitals of the small towns.

Develop the disinfection, delousing and shower-bath stations in the large towns and centres of communication, in order to be able to deal rapidly with any invasion of typhus.

Provide for the bacteriological diagnosis of infectious diseases in the large towns ; and create, by degrees, district laboratories and a central health laboratory.

In the work of modernisation and reconstruction which is being pursued, concentrate on raising the standard of the whole, rather than on perfecting a particular branch to the detriment of the rest.

With a view to the best possible utilisation of existing resources, establish close co-operation between the different departments and auxiliary institutions, the Government departments, towns, districts, universities, private and Red Cross societies, Anti-Tuberculosis Union, etc., in order that the work of reconstruction may proceed on rational lines, and that luxuries may not be put before necessities.

The health organisations of a country are a function of its wealth and civilisation. Those of Latvia are of recent date, but it may be confidently anticipated that they will soon reach the same stage of perfection as those of older countries.

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